

# fkf Practice Tests

## Grade 3 Maths

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Books**

# Grade 3 Maths Tests Contents and Printing Guide

This page can be used for selecting material to print for students, note, the document may be printed as a paper or electronic (pdf) copy using the page subsets below.

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# GRADE THREE END OF YEAR SAMPLE TEST

## TABLE OF SPECIFICATION: SECTION A

### SECTION A – MULTIPLE CHOICE

Section A comprises 44 multiple choice items covering the five strands of the curriculum. All items are weighted equally and together are worth 44 marks.

STRANDS	Simple Recall/ Knowledge	Use of Knowledge	Mathematical Reasoning	Total # of Items
Number	4 (1,4, 5,8)	13 (2,3,6,7, 9,10,11,12, 13, 14,15, 16, 17)		17
Measurement	3 (19,26, 27)	6 (20,21,23,24,25,28)	1 (18)	10
Geometry	5 (22,29,30,31,32)	1 (33)		6
Algebra	-	5 (34,35,36,37, 38)		5
Statistics	-	6 (39,40,41 42, 43, 44)		6
Total # of Items	12	31	1	44

## TABLE OF SPECIFICATION: SECTION B

### SECTION B

Section B comprises 4 structured questions covering four of the five strands of the curriculum. Students are required to answer all questions. Questions are weighted differently giving a total of 16 marks.

STRANDS	Simple Recall/ Knowledge	Use of Knowledge	Mathematical Reasoning	Total # of Marks
Number		1 (Ques. 2a)	3 (Ques. 2b)	4
Measurement		4 (Ques. 3a, 3b, 3c)		4
Geometry		4 (Ques. 4a, 4b, 4c)		4
Statistics		2+1+1 (Ques. 1a, 1b, 1c)		4
Total # of marks		13	3	16



# SAMPLE END OF YEAR TEST – SECTION A

Grade Three

Mathematics

Sample End of Year Test

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## SECTION A

CIRCLE THE CORRECT ANSWER FOR EACH OF THE FOLLOWING.

1. What is the place value of 8 in the number 286?

- a) ones
- b) tens
- c) hundreds
- d) eights

2. What fraction is shaded?



- a)  $\frac{1}{4}$
- b)  $\frac{1}{3}$
- c)  $\frac{1}{2}$
- d)  $\frac{4}{4}$

3. What is 46 rounded off to the nearest 10?

- a) 40
- b) 45
- c) 47
- d) 50

4. What are the missing numbers in the following series 4, \_\_\_\_, \_\_\_\_, 10, 12, 14?

- a) 6, 8
- b) 8, 6
- c) 8, 9
- d) 5, 9

5. Which set has all odd numbers?

- a) {2, 4, 6}
- b) {3, 5, 7}
- c) {2, 3, 5}
- d) {3, 4, 7}

6. What is  $\frac{1}{2}$  of 14 balls?



- a) 9 balls
- b) 8 balls
- c) 7 balls
- d) 6 balls

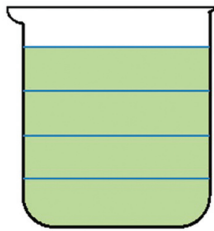
7. What is the expanded form of 235?

- a)  $200 + 30 + 5$
- b)  $200 + 3 + 5$
- c)  $2 + 35 + 0$
- d)  $2 + 3 + 5$

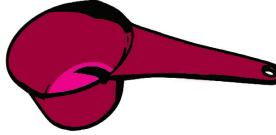
8. Which numbers come directly before and directly after 250?
- a) 250 and 251
  - b) 240 and 260
  - c) 249 and 251
  - d) 251 and 252
9. What is the value of  $87 - 42$ ?
- a) 44
  - b) 45
  - c) 54
  - d) 55
10. Place the following numbers in order of size, from the smallest to the largest:  
140, 110, 130, 120.
- a) 120, 110, 130, 140
  - b) 110, 120, 130, 140
  - c) 140, 110, 130, 120
  - d) 110, 130, 120, 140
11. What is the value of  $648 \div 3$ ?
- a) 26
  - b) 212
  - c) 216
  - d) 2016
12. Peter bought a cake and shared it with his friends. He gave Roy  $\frac{5}{8}$  and took  $\frac{2}{8}$  for himself.  
What fraction of the cake was shared between the two boys?
- a)  $\frac{3}{8}$
  - b)  $\frac{1}{8}$
  - c)  $\frac{7}{16}$
  - d)  $\frac{7}{8}$

13. What is the value of  $205 \times 3$  ?
- a) 208
  - b) 605
  - c) 615
  - d) 6015
14. Ms Hall bought 39 sweets for her class. How many dozen sweets can she get from this total?
- a) 2
  - b)  $2 \frac{1}{2}$
  - c)  $3 \frac{1}{4}$
  - d) 4
15. What is the value of the underlined digit in the number 6, 753?
- a) 5 ones
  - b) 5 tens
  - c) 5 hundreds
  - d) 5 thousands
16. The grade 3 students at Harris Primary School read 5,859 books. The grade 4 students read 8,329 books. How many more books did the grade 4 students read than the grade 3 students?
- a) 2,470
  - b) 2,480
  - c) 3,530
  - d) 3,540
17. Claude had 32 plums. He gave Christine 14 and then bought 9 more plums. How many plums does Claude now have?
- a) 9
  - b) 27
  - c) 37
  - d) 55

18. The container below can hold 1 cup of juice. How many  $\frac{1}{8}$  cups are needed to fill the container?

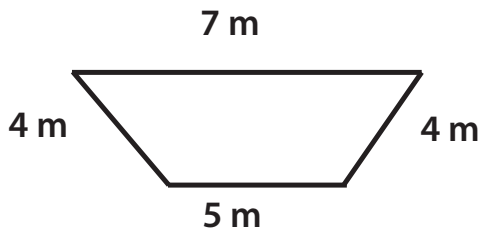


**1 cup**



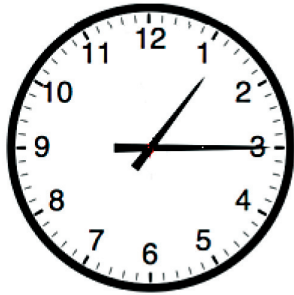
**$\frac{1}{8}$  cup**

- a) 2
- b) 4
- c) 6
- d) 8
19. Which of the following instruments is used to measure mass?
- a) thermometer
- b) measuring cup
- c) balance scale
- d) clock
20. What is the perimeter of the figure shown?



- a) 12m
- b) 13m
- c) 16m
- d) 20m

21. What time is the clock showing below?



- a) Quarter past 3
- b) Quarter to 3
- c) Quarter past 1
- d) 3 past 1

22. Which of the following signs has the shape of a pentagon?



23. Pamela is 3 years older than Nicholas. How old will Pamela be when Nicholas is 8 years old?

- a) 11 years old
- b) 8 years old
- c) 5 years old
- d) 3 years old

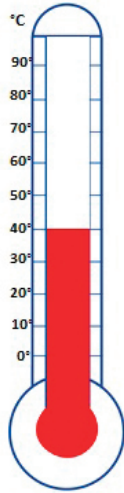
The calendar below shows that Mark and Marsha celebrated their birthday on July 11, 2009. Use the calendar to answer questions 24 – 25.

July 2009						
SUN	MON	TUE	WED	THUR	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

24. How old is Mark if he was born on July 11, 1995?
- a) 12 years old
  - b) 13 years old
  - c) 14 years old
  - d) 15 years old
25. If Mark was born 1994 and Marsha was born 1996. How much older is Mark than Marsha?
- a) 1 year older
  - b) 2 years older
  - c) 3 years older
  - d) 4 years older
26. Mother bought the following items at the store: milk, rope, chicken and egg. Which of the items would be most likely measured in litres?
- a) milk
  - b) rope
  - c) chicken
  - d) egg

27. Which of the temperatures below matches the picture?

- a)  $80^{\circ}\text{C}$
- b)  $40^{\circ}\text{C}$
- c)  $25^{\circ}\text{C}$
- d)  $10^{\circ}\text{C}$



28. Which is the most appropriate unit that Paula can use to measure the length of a pencil?

- a) cm
- b) m
- c) Hm
- d) Km


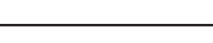
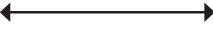

29. Which of the following statements is true about the shape below?



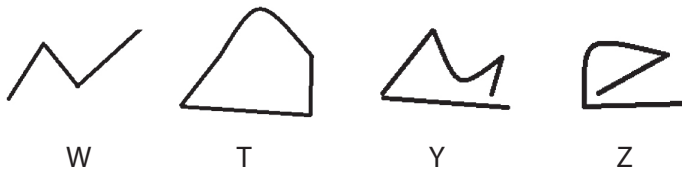
- a) The shape has 4 acute angles.
- b) The shape has 2 acute angles and 2 right angles.
- c) The shape has 4 right angles.
- d) The shape has 2 acute angles and 2 obtuse angles.



30. Which of the following is a ray?

- a) 
- b) 
- c) 
- d) 

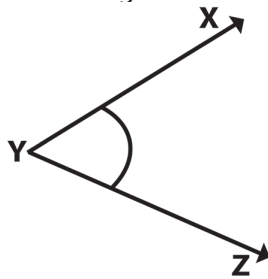
31. Which diagram shows a closed path?







- a) W
- b) T
- c) Y
- d) Z

32. What is the name of the angle below?

- a)  $\angle YXZ$
- b)  $\angle ZXY$
- c)  $\angle XYZ$
- d)  $\angle XZY$



33. Which figure has the greatest number of acute angles?

- a) 
- b) 
- c) 
- d) 

34. If  $P = 7$ , what is the value of  $67 - P$ ?

- a) 6
- b) 7
- c) 60
- d) 74

35. If  $m = 43$ , then  $m + m =$

- a) 67
- b) 68
- c) 86
- d) 4343

36. If  $\square = 8$ , which of the following number sentences is true?

- a)  $\square - 5 = 12$
- b)  $20 + \square = 25$
- c)  $18 - \square = 10$
- d)  $\square + 6 = 15$

37. If  $p + 4 = 12$ , what is  $p$ ?

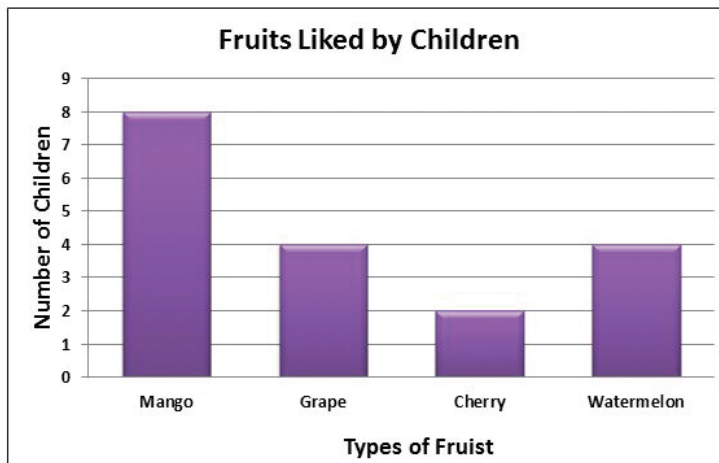
- a) 3
- b) 8
- c) 16
- d) 48

38. Which of the following numbers would complete the number sentence?

$$8 + \square = 3 \times 5$$

- a) 16
- b) 7
- c) 5
- d) 3

Observe the graph below. Use it to answer question 39.



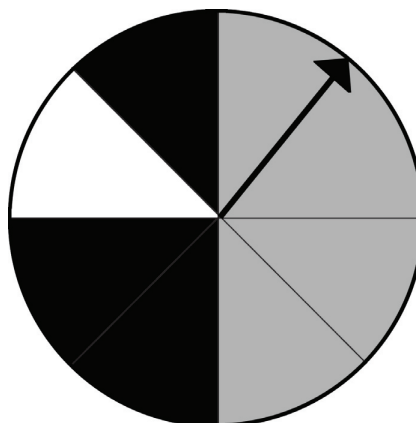
39. How many students enjoyed grape more than cherry?
- a) 2
  - b) 4
  - c) 6
  - d) 8
40. Timmy has 5 red buttons, 4 blue buttons and 3 black buttons in a bag. What is the chance of him pulling out a red button?
- a) certain
  - b) impossible
  - c) equally likely
  - d) not likely

The table below shows the number of students who liked chicken, beef and cheese patties. Use it to answer questions 41 and 42.

Patties	Number of Students
Chicken	😊😊😊
Beef	😊😊😊😊😊😊
Cheese	😊😊😊😊😊😊😊😊

Key 😊 represents 2 students

41. How many students liked cheese patties?
- a) 5
  - b) 6
  - c) 10
  - d) 11
42. How many students liked beef patties more than chicken patties?
- a) 4
  - b) 5
  - c) 6
  - d) 7
43. Look at the wheel below and answer the question which follows. If you spin the wheel, the arrow is \_\_\_\_\_ to land on the white than the black.
- a) certain
  - b) most likely
  - c) less likely
  - d) equally likely







Use the information below to answer question 44.  
 The table below shows the number of pencils bought by four classes over a month.





Classes	Number of pencils sold
Grade 3A	16
Grade 3B	20
Grade 3C	12

44. Which of the pictographs shows the same information?












a)

Classes	Number of pencils sold
Grade 3A	
Grade 3B	
Grade 3C	
 = 3 pencils	














b)

Classes	Number of pencils sold
Grade 3A	
Grade 3B	
Grade 3C	
 = 2 pencils	

c)

Classes	Number of pencils sold
Grade 3A	  
Grade 3B	   
Grade 3C	  
 = 5 pencils	

d)

Classes	Number of pencils sold
Grade 3A	   
Grade 3B	    
Grade 3C	  
 = 4 pencils	

# SAMPLE END OF YEAR TEST – SECTION B

Grade Three

Mathematics

Sample End of Year Test

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## SECTION B

### ANSWER ALL QUESTIONS IN THIS SECTION

1. Pam kept a score of the different colours of the cars that passed her house.

- a) Examine and complete the tally table for Pam. (2 marks)

Colour Cars	Tally	Number
White	III III III	
Grey		11
Black	III III	

- b) Which colour car passed Pam's house the most number of times? \_\_\_\_\_  
(1mark)

- c) Which colour car passed Pam's house the least number of times? \_\_\_\_\_  
(1mark)

2. Timmy went to the store and saw these items for sale.



- a) How much would Timmy pay for 2 caps and a pair of shorts?(show all working)

\_\_\_\_\_ (1mark)

- b) Timmy wants to buy a pair of sneakers and 2 other items out of \$350. What are these items and how much change will he receive after buying these items?

\_\_\_\_\_ (3marks)

3. Look at the calendar and complete the statements below.

MARCH						
Sun	Mon	Tue	Wed	Thurs	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

a) The last day of the previous month was a \_\_\_\_\_ (2 marks)

b) The second day of April will be a \_\_\_\_\_ (1 mark)

c) There are \_\_\_\_\_ school days in March. (1 mark)

4. Draw sketches to show the following figures:

a) Line segment LM (1 mark)

b) Rays PQ and PS meeting at point 'P'. (2 marks)

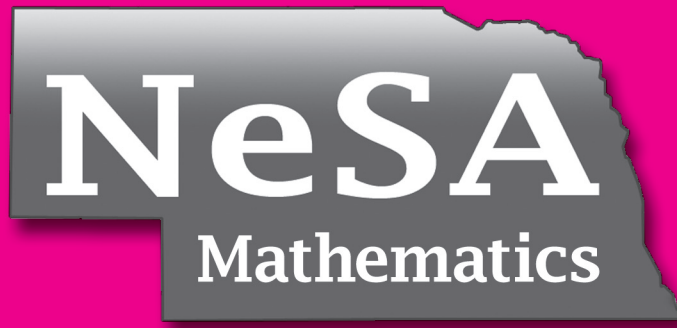
c) A right angle. (1 mark)



## SAMPLE END OF YEAR TEST – ANSWER SHEET

### Answer Sheet Grade Three Sample Test

- |       |       |
|-------|-------|
| 1. B  | 23. A |
| 2. C  | 24. C |
| 3. D  | 25. B |
| 4. A  | 26. A |
| 5. B  | 27. B |
| 6. C  | 28. A |
| 7. A  | 29. C |
| 8. C  | 30. A |
| 9. B  | 31. B |
| 10. B | 32. C |
| 11. C | 33. D |
| 12. D | 34. C |
| 13. C | 35. C |
| 14. C | 36. C |
| 15. B | 37. B |
| 16. A | 38. B |
| 17. B | 39. A |
| 18. D | 40. A |
| 19. C | 41. D |
| 20. D | 42. B |
| 21. C | 43. C |
| 22. D | 44. D |



# **Nebraska State Accountability**

**Grade 3  
Mathematics  
Practice Test**

**Name:**

**Directions:**

On the following pages are multiple-choice questions for the Grade 3 Practice Test, a practice opportunity for the *Nebraska State Accountability–Mathematics (NeSA–M)*.

Each question will ask you to select an answer from among four choices.

For all questions:

- Read each question carefully and choose the best answer.
- You may use scratch paper to solve the problems.
- You may not use a calculator on this test.
- Be sure to answer ALL the questions.

Remember only one of the answers provided is the correct response.

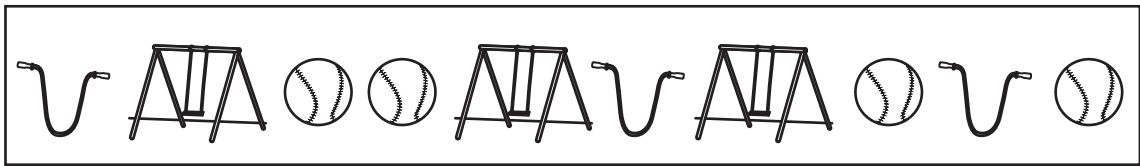
1. Use the numbers below to answer the question.

88, \_\_\_\_, 66, 55

Based on the pattern, which number is missing?

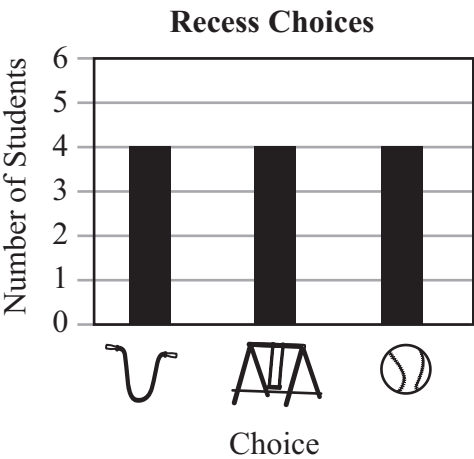
- A. 44
  - B. 77
  - C. 78
  - D. 87
2. Which is the BEST unit to measure the distance between Nebraska and Maine?
- A. foot
  - B. inch
  - C. mile
  - D. yard
3. What is the missing number in  $93 - \triangle = 68$ ?
- A. 25
  - B. 35
  - C. 151
  - D. 161

4. Use the picture below to answer the question.

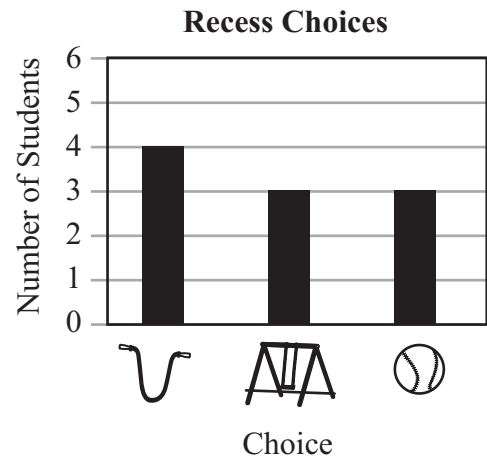


Which bar graph shows the information in the picture?

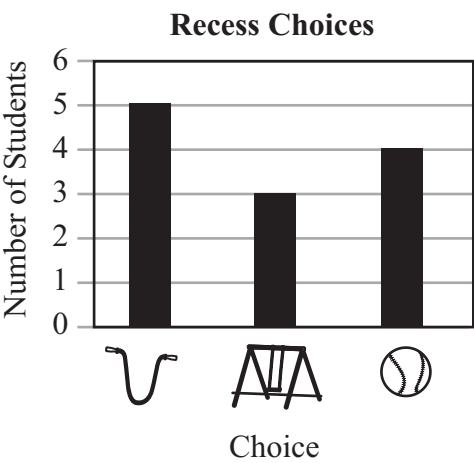
A.



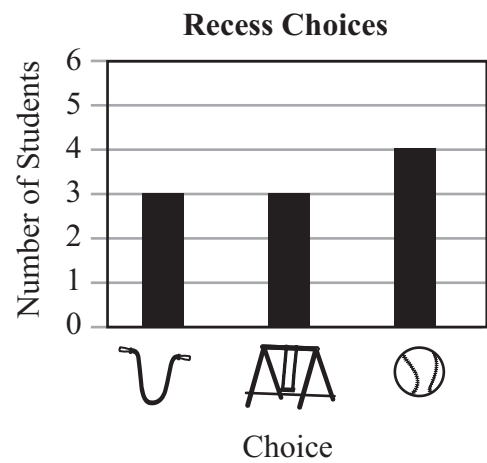
B.



C.



D.



5. Use the number sentence below to answer the question.

$$2,345 + 1,100 \boxed{\phantom{00}} 5,432 - 2,110$$

Which symbol makes the number sentence true?

- A. +
  - B. -
  - C. <
  - D. >
6. What is the standard form of forty-three thousand, twelve?
- A. 43,012
  - B. 43,102
  - C. 43,120
  - D. 43,312
7. Which number is rounded to the nearest ten?
- A. 39
  - B. 42
  - C. 55
  - D. 60

## MATHEMATICS PRACTICE TEST

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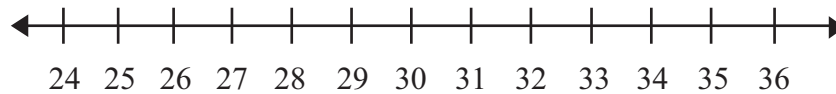
8. Which shape has five sides?

- A. hexagon
- B. octagon
- C. pentagon
- D. rectangle

9. What is the missing addend in  $8 + \triangle = 14$ ?

- A. 6
- B. 8
- C. 14
- D. 22

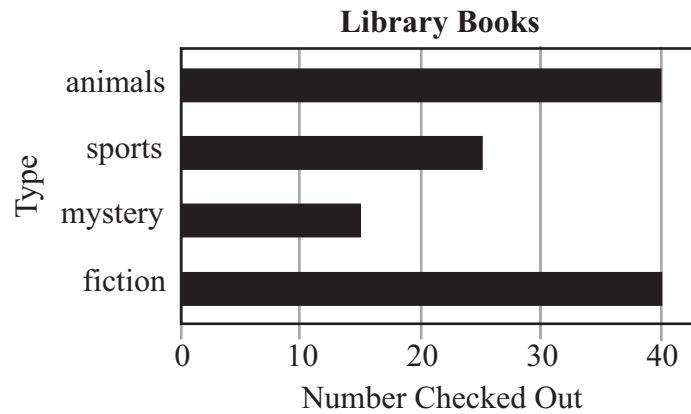
10. Use the number line below to answer the question.



What is the sum of  $24 + 3 + 6$ ?

- A. 27
- B. 30
- C. 33
- D. 34

11. Use the graph below to answer the question.



How many more fiction books are checked out than sports books?

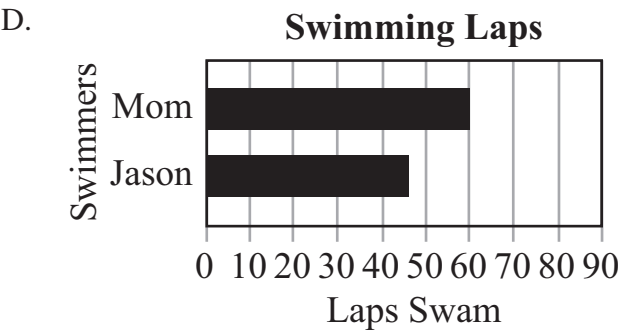
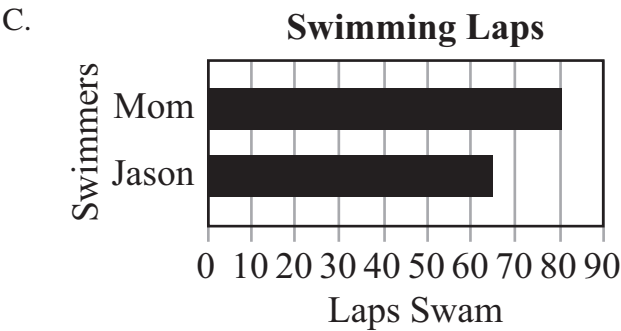
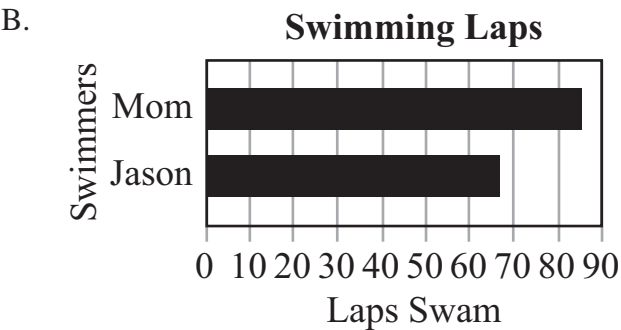
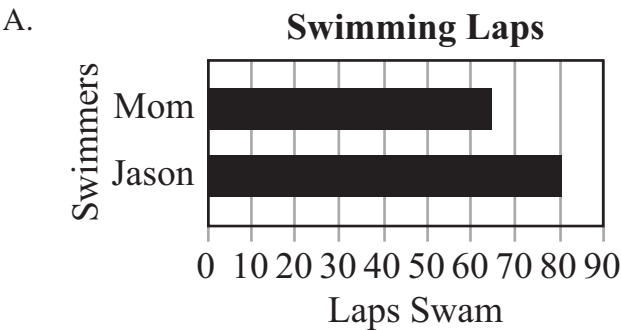
- A. 15
- B. 20
- C. 25
- D. 30



12. Use the table below to answer the question.

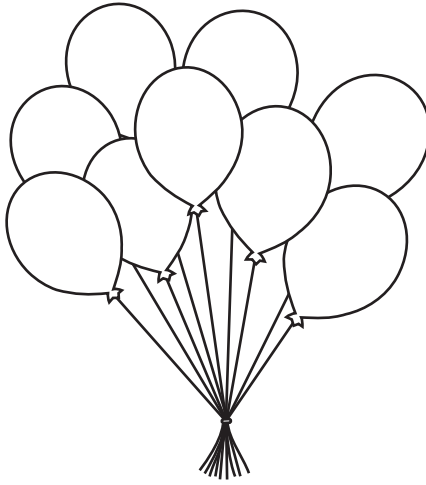
Swimming Laps		
June		
Week	Mom	Jason
One	20	10
Two	25	20
Three	15	15
Four	20	20

Which bar graph shows the total number of laps Mom and Jason each swam in June?



13. Use the picture below to answer the question.

Balloons



What fraction of the balloons remains after four balloons pop?

- A.  $\frac{2}{3}$
- B.  $\frac{5}{9}$
- C.  $\frac{1}{2}$
- D.  $\frac{1}{3}$

14. Which number is the same as 1,670?

- A. 16 hundreds and 7 tens
- B. 1 hundred and 67 tens
- C. 1 thousand and 6 hundreds
- D. 16 thousands and 7 tens

15. Use the picture below to answer the question.



Which shape is  $\frac{1}{3}$  of the trapezoid?

A.



B.



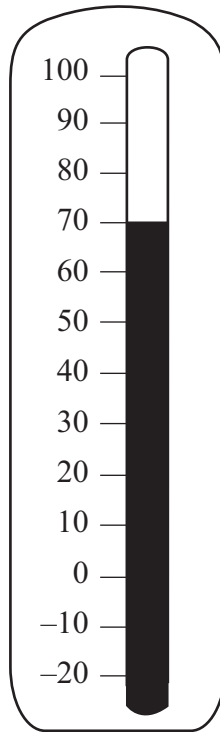
C.



D.



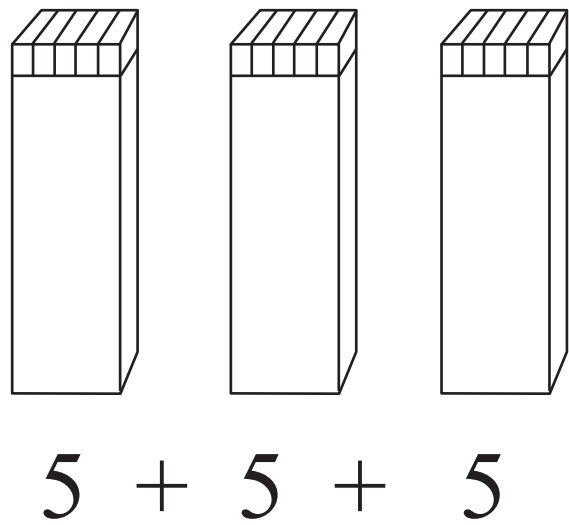
16. Use the picture below to answer the question.



The temperature on Thursday afternoon was  $70^{\circ}\text{F}$ , as shown on the thermometer. A storm came through and the temperature dropped  $30^{\circ}$ . What was the temperature after the storm?

- A.  $30^{\circ}$
- B.  $40^{\circ}$
- C.  $50^{\circ}$
- D.  $70^{\circ}$

17. Use the picture below to answer the question.



Which is another way to show the number of sticks of gum?

- A.  $3 \times 3$
- B.  $3 \times 5$
- C.  $5 \times 5$
- D.  $1 \times 3$

18. Use the table below to answer the question.

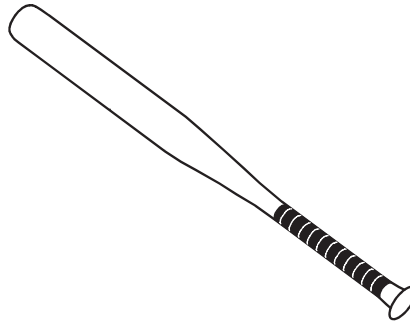
Heights of Children				
Child	Jack	Trevon	Anna	Gabby
Height	137 centimeters	1 meter	92 centimeters	120 centimeters

Which list orders the children from tallest to shortest?

- A. Jack, Gabby, Trevon, Anna
- B. Jack, Trevon, Anna, Gabby
- C. Trevon, Anna, Gabby, Jack
- D. Anna, Trevon, Gabby, Jack

19. Which is the BEST number sentence for finding the distance a cheetah can run in four hours?
- A.  $70 + 4 = 74$  miles
  - B.  $70 - 4 = 66$  miles
  - C.  $70 + 70 + 70 = 210$  miles
  - D.  $70 + 70 + 70 + 70 = 280$  miles
20. There are fifteen apples on a tree. Six apples are on the ground. Which number sentence shows how to find the total number of apples?
- A.  $6 + 21 = 27$
  - B.  $15 + 6 = 21$
  - C.  $27 - 15 = 12$
  - D.  $15 - 6 = 9$
21. Which number is greater than 7,350?
- A. 7,206
  - B. 7,333
  - C. 7,801
  - D. 7,060

22. Use the picture below to answer the question.



Which measurement is closest to the length of a baseball bat?

- A. 1 inch
- B. 1 foot
- C. 1 yard
- D. 1 mile

23. Which shape has the fewest sides?

- A. triangle
- B. pentagon
- C. rectangle
- D. hexagon

24. Use the picture below to answer the question.

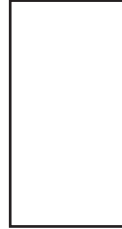


Which shape appears to be congruent to the picture?

A.



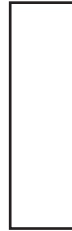
B.



C.



D.





## Grade 3 Practice Test

### Answer Key

Number	Key
1	B
2	C
3	A
4	D
5	D
6	A
7	D
8	C
9	A
10	C
11	A
12	C
13	B
14	A
15	D
16	B
17	B
18	A
19	D
20	B
21	C
22	C
23	A
24	D



Louisiana Believes

# **Grade 3 Math Practice Test**

## **2013-2014**

# iLEAP Practice Test—Grade 3 Math

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## Test Administrator Instructions

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- ★ This document contains a Practice Test that shows what each part, or session, of an actual grade 3 math assessment is like.

The Practice Test may be used at home or at school for students to become familiar with the iLEAP test they will take in spring 2014. It may help students feel more relaxed when they take the actual test.

- ★ The Assessment Structure provides information on the overall design of the actual test. The Assessment Structure and example items can be found on the Louisiana Department of Education's website.

<http://www.louisianabelieves.com/resources/library/assessment-guidance-2013-2014>

The mathematics test has three sessions to be taken separately:

- Session 1 (pages 3 to 17) includes 30 multiple-choice questions—a calculator may not be used.
  - Session 2 (pages 19 to 31) includes 20 multiple-choice questions—a calculator may be used.
  - Session 3 (page 33) includes 1 constructed-response question—a calculator may be used.
- ★ A Mathematics Reference Sheet, which students may use for all sessions, is located on page 36.
  - ★ Students respond to multiple-choice items using the Answer Sheets on pages 34 and 35 and a constructed-response item using page 33 of Session 3.
  - ★ The Answer Keys and Scoring Rubric, used to score student responses, are located on pages 37 to 39.

When printing the PDF files for the three Math Sessions, be sure to set the *Page Scaling* drop-down menu on the Print screen to None, No Scaling, or Actual Size depending on the printer you are using. Otherwise, measurement items may not be the correct size, which may impact student responses.



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## Math—Sessions 1, 2, and 3

### GENERAL INSTRUCTIONS

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The Math test has three sessions, two with multiple-choice questions and one with a constructed-response question. You may **not** use a calculator for session 1, but you may use a calculator for sessions 2 and 3.

## Session 1—Math (No Calculator)

Write your answers for questions 1 through 30 in the spaces provided on page 34, session 1 answer sheet. Write only one answer for each question. You may work problems in your test booklet or on scratch paper, but you must mark your answer on your answer sheet. You may review your work in this session, but do not work on any other session.



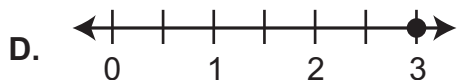
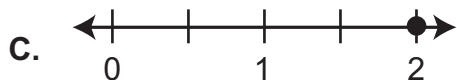
**You may NOT use a calculator for this session.**

1. Terri and Mike each bought 70 donuts from a bakery. The total number of donuts they bought can be found using the expression shown below.

$$2 \times 70$$

What is the total number of donuts Terri and Mike bought from the bakery?

- A. 72 donuts  
B. 104 donuts  
C. 140 donuts  
D. 270 donuts
2. Vince covered  $\frac{2}{1}$  cakes with frosting. He marked a point on a number line to show how many cakes he covered with frosting. Which number line shows the point Vince marked?



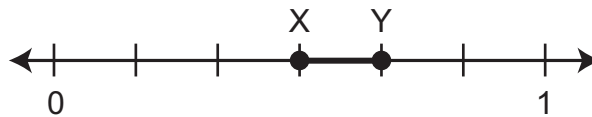
## Session 1—Math (No Calculator)

3. Sanders ran for 22 minutes. Gabe ran 7 minutes longer than Sanders did. Helen ran 12 minutes less than Gabe. For how many minutes did Helen run?
- A. 3 minutes  
B. 17 minutes  
C. 27 minutes  
D. 41 minutes
4. Maria spends \$9 on lunch each day she is at work. To find how much money she spends on lunch during a 5-day workweek she solves the expression below.

$$5 \times 9$$

How much money does Maria spend on lunch during a 5-day workweek?

- A. \$40  
B. \$45  
C. \$50  
D. \$59
5. Anita ran part of a 1-mile relay race. The part of the race she ran is shown on the number line below.



Anita started at point X and finished at point Y. What fraction of the 1-mile relay race did she run?

- A.  $\frac{1}{6}$   
B.  $\frac{1}{5}$   
C.  $\frac{2}{7}$   
D.  $\frac{4}{6}$

## Session 1—Math (No Calculator)

6. Samantha has 342 baseball cards. Perry has 184 baseball cards. The difference between the number of baseball cards Samantha and Perry have can be found by solving the expression below.

$$342 - 184$$

How many more baseball cards does Samantha have than Perry?

- A. 158
  - B. 162
  - C. 242
  - D. 268
7. Maggie bought 56 straws. For  $\square$  days her family used 7 new straws each day. Maggie used the number sentence below to find how many days the family took to use all the straws.

$$56 \div \square = 7$$

How many days did Maggie's family take to use all the straws?

- A. 8 days
  - B. 27 days
  - C. 49 days
  - D. 63 days
8. Wendy bought 30 packs of gum. Each pack had 5 pieces. She used the expression below to find the number of pieces of gum she bought.

$$30 \times 5$$

Which other expression could Wendy use to find the number of pieces of gum she bought?

- A.  $3 \times 5 + 10$
- B.  $3 \times 5 \times 10$
- C.  $3 \times 10 + 5$
- D.  $3 + 10 + 5$

## Session 1—Math (No Calculator)

9. The width, in inches, of three of Yi's buttons are shown in the table.

Yi's Buttons

Buttons	Width (inches)
blue	$\frac{3}{4}$
red	$\frac{3}{8}$
green	$\frac{6}{8}$

Which statement about the widths of Yi's buttons must be true?

- A. The width of the blue button is less than the width of the red button because  $\frac{3}{4} < \frac{3}{8}$ .
- B. The width of the red button is less than the width of the green button because  $\frac{3}{8} < \frac{6}{8}$ .
- C. The width of the blue button is equal to the width of the red button because  $\frac{3}{4} = \frac{3}{8}$ .
- D. The width of the green button is greater than the width of the blue button because  $\frac{6}{8} > \frac{3}{4}$ .
10. Polly set up chairs for a meeting. She set up 7 rows of chairs. There were 9 chairs in each row. The number of chairs Polly set up for the meeting can be found by solving the expression below.

$$9 \times 7$$

How many chairs did Polly set up for the meeting?

- A. 53 chairs
- B. 61 chairs
- C. 63 chairs
- D. 79 chairs



## Session 1—Math (No Calculator)

11. Liam broke a candy bar into equal pieces. He gave away  $\frac{3}{3}$  of it. Which number is equal to the fraction of the candy bar Liam gave away?

A. 1  
B. 3  
C. 6  
D. 9

12. Michelle has 7 packages of crayons. Each package has  $\square$  crayons. She has a total of 42 crayons. Michelle uses the number sentence below to find how many crayons are in each package.

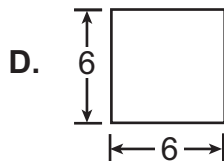
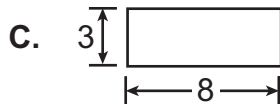
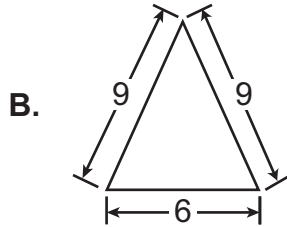
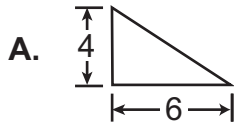
$$7 \times \square = 42$$

How many crayons are in each of Michelle's packages?

- A. 6 crayons  
B. 8 crayons  
C. 35 crayons  
D. 49 crayons
13. Milan is giving away 18 stickers to 3 of his friends. He gives each friend the same number of stickers. One of the friends, Nelly, already had 2 stickers. Which number sentence can be used to find the total number of stickers,  $n$ , Nelly has?
- A.  $18 - 3 \times 2 = n$   
B.  $18 - 3 + 2 = n$   
C.  $18 \div 3 + 2 = n$   
D.  $18 \div 3 \times 2 = n$

## Session 1—Math (No Calculator)

14. Vang multiplies two numbers. His answer is 24. Which figure could model Vang's multiplication?



15. A package of paper towels has 12 rolls of paper towels in it. Mr. Kelly will put an equal number of rolls of paper towels in 4 rooms. He uses the number sentence below to find the number of rolls of paper towels,  $t$ , he will put in each room.

$$12 \div t = 4$$

Which number sentence can Mr. Kelly use to find the number of rolls of paper towels,  $t$ , he will put in each room?

- A.  $4 \div 12 = t$
- B.  $4 - t = 12$
- C.  $4 + 12 = t$
- D.  $4 \times t = 12$

## Session 1—Math (No Calculator)

16. Jimmy and Kima are going on a trip. They will drive for three days. The first day they will drive 182 miles. The second day they will drive 439 miles. The third day they will drive 217 miles. Which expression is the **closest** estimate of how many miles Jimmy and Kima will drive on their trip?
- A.  $100 + 400 + 200$   
B.  $200 + 400 + 200$   
C.  $200 + 500 + 200$   
D.  $200 + 500 + 300$
17. Brooke's baby, Ryan, weighed 7 pounds when he was born. Brooke weighed her baby each month after he was born. Ryan's weight each month, in pounds, is shown in the table below.

**Ryan's Weight**

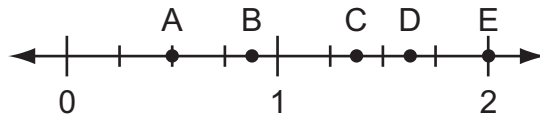
Age	Weight (pounds)
birth	7
1 month	9
2 months	11
3 months	13
4 months	15

Which statement about the weight of the baby is true?

- A. The baby gained 1 pound each month.  
B. The baby gained 2 pounds each month.  
C. The baby gained 9 pounds in the first month.  
D. The baby gained 15 pounds in the last month.

## Session 1—Math (No Calculator)

18. Jason is measuring the lengths of different insects, in inches. He plots the lengths on the number line below.



The length of the first insect Jason measured is  $\frac{6}{8}$  of an inch. Between which two points on the number line is the location of the length of the first insect?

- A. points A and B
  - B. points B and C
  - C. points C and D
  - D. points D and E
19. Shodi earned 389 points in the first level of her video game. She earned 116 more points in the bonus round. The total number of points Shodi earned can be found by solving the expression below.

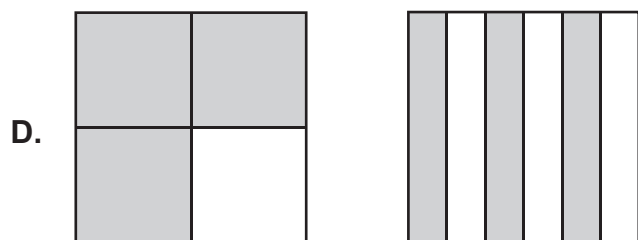
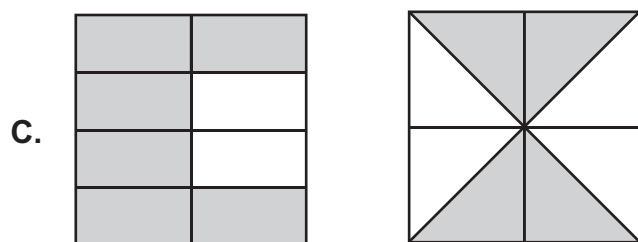
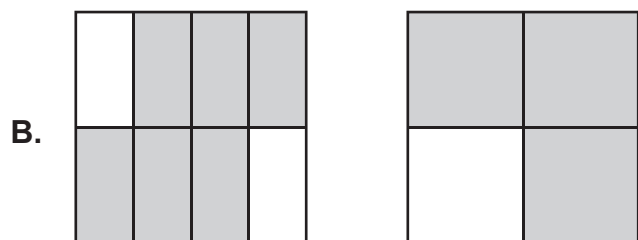
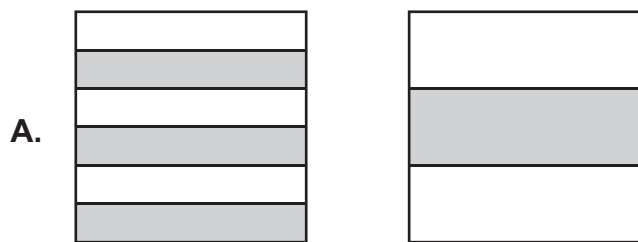
$$389 + 116$$

How many total points did Shodi earn?

- A. 405
- B. 495
- C. 505
- D. 595

## Session 1—Math (No Calculator)

20. Which pair of squares has the same fraction shaded?



## Session 1—Math (No Calculator)

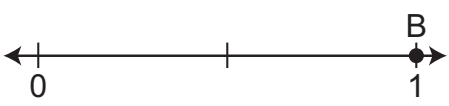

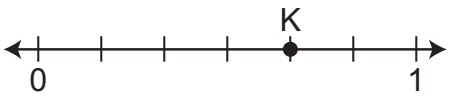
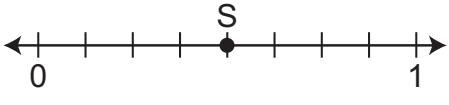
21. Ms. Fisher wants to find the total number of markers needed for an art project. She uses the expression below to find how many markers she needs.

$$(2 \times 6) \times 8$$

Which expression is equal to the one used by Ms. Fisher?

- A.  $2 + (6 + 8)$   
B.  $2 + (6 \times 8)$   
C.  $2 \times (6 + 8)$   
D.  $2 \times (6 \times 8)$
22. There are four baseball teams. Each team has played some of its games this season. The fractions of games won are shown in the table below. The fractions of games won are also represented by the number lines in the table.

**Baseball Teams**

Team	Fraction of Games Won	Number Line
Bison	$\frac{2}{2}$	
Eagles	$\frac{2}{4}$	
Knights	$\frac{4}{6}$	
Sharks	$\frac{4}{8}$	

Two teams have won the same fraction of games. Which sentence explains how the number lines show this?

- A. The Bison and the Eagles are each 2 spaces from 0.  
B. The Knights and the Sharks are each 4 spaces from 0.  
C. The Eagles and the Knights are each the same distance from 1.  
D. The Eagles and the Sharks are each the same distance from 0 and 1.

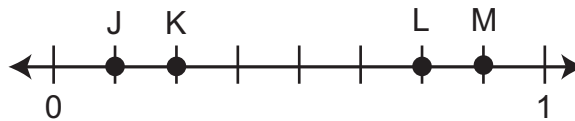
## Session 1—Math (No Calculator)

23. Addison has 72 CDs. She put the same number of CDs into each of her 8 CD cases. The total number of CDs Addison put into each case can be found by solving the expression below.

$$72 \div 8$$

How many CDs did Addison put into each case?

- A. 7 CDs  
B. 9 CDs  
C. 12 CDs  
D. 16 CDs
24. Carmen has 4 tomatoes she will eat this week. The weight, in pounds, of each tomato is shown on the number line below.

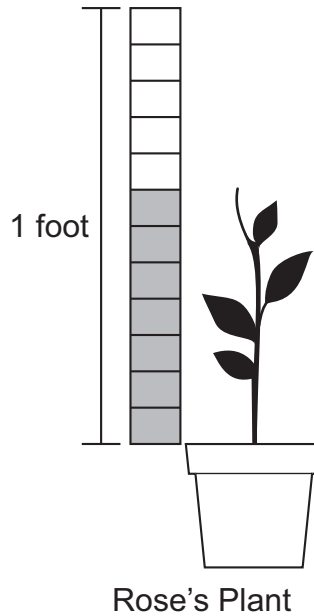


The first tomato Carmen will eat weighs  $\frac{2}{8}$  of a pound. Which point on the number line represents the first tomato Carmen will eat?

- A. J  
B. K  
C. L  
D. M

## Session 1—Math (No Calculator)

25. In science class, Rose kept track of the height of her plant. The height of her plant after 3 weeks is shown in the picture below.



What fraction of a foot is the height of Rose's plant?

- A.  $\frac{5}{7}$
- B.  $\frac{7}{5}$
- C.  $\frac{5}{12}$
- D.  $\frac{7}{12}$

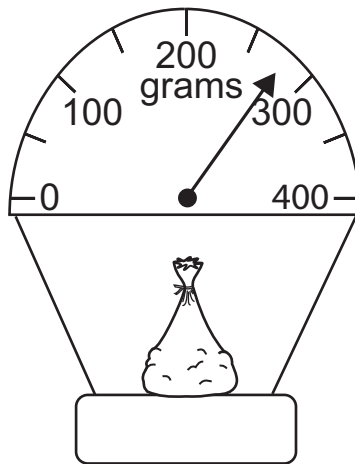


## Session 1—Math (No Calculator)

26. Which story problem can be solved using the expression  $3 \times 4$ ?

- A. Missy, Margo, and Davis buy some pears at the store.  
They each buy 4 pears.  
How many pears do they have altogether?
- B. Missy lives 3 miles from school.  
Kerry lives 4 miles from school.  
How much farther does Kerry live from school than Missy?
- C. Missy, Liz, Dao, and Larry have a total of 4 feet of rope.  
They each have the same length of rope.  
How much rope does each person have?
- D. Missy has 3 pounds of strawberries.  
She gives the same amount to each of 4 friends.  
How many pounds of strawberries does each friend get?

27. Bob is buying gummy bears at the grocery store. He places his bag of gummy bears on the scale shown below.

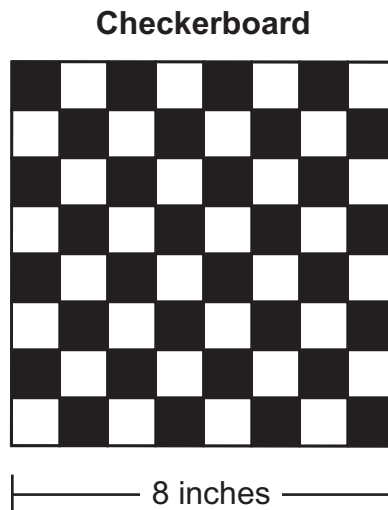


What is the **best** estimate of the mass, in grams, of Bob's gummy bears?

- A. 250 grams
- B. 275 grams
- C. 325 grams
- D. 350 grams

## Session 1—Math (No Calculator)

28. A drawing of a square checkerboard is shown.

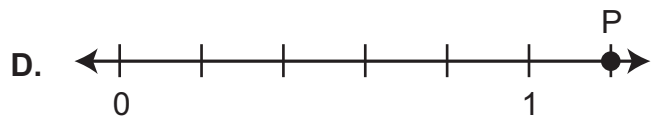
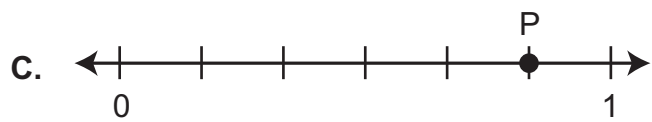
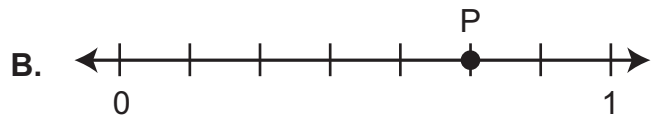
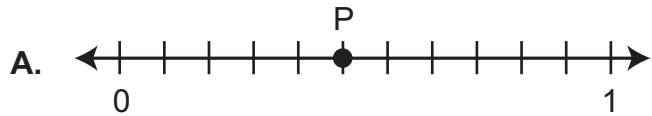


The length of each side of the checkerboard is 8 inches. All of the black and white squares are the same size. What is the perimeter of one of the black squares on the checkerboard?

- A. 1 inch
- B. 4 inches
- C. 32 inches
- D. 64 inches

## Session 1—Math (No Calculator)

29. Paula finished  $\frac{5}{6}$  of her homework. Which number line marks the fraction of Paula's homework that is finished with point P?



30. Randy and Chrissy eat some of the blueberries from a package for a snack. Randy eats  $\frac{1}{4}$  of the blueberries from the package. Chrissy eats  $\frac{1}{3}$  of the blueberries from the package. Which statement about the amount of blueberries Randy and Chrissy each eat is true?

- A. Since the two fractions do not refer to the same whole, it is not possible to tell who eats more blueberries.
- B. Since fractions that have different denominators cannot be compared, it is not possible to tell who eats more blueberries.
- C. Since smaller denominators mean bigger fractions, then  $\frac{1}{3} > \frac{1}{4}$ , which means Chrissy eats more blueberries than Randy.
- D. Since bigger denominators mean bigger fractions, then  $\frac{1}{4} > \frac{1}{3}$ , which means that Randy eats more blueberries than Chrissy.



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## Math—Sessions 1, 2, and 3

### GENERAL INSTRUCTIONS

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The Math test has three sessions, two with multiple-choice questions and one with a constructed-response question. You may **not** use a calculator for session 1, but you may use a calculator for sessions 2 and 3.

## Session 2—Math (Calculator)

Write your answers for questions 31 through 50 in the spaces provided on page 35, session 2 answer sheet. Write only one answer for each question. You may work problems in your test booklet or on scratch paper, but you must mark your answer on your answer sheet. You may review your work in this session, but do not work on any other session.



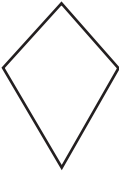
**You MAY use a calculator for this session.**

31. Skyler has two groups of quadrilaterals. The first group has quadrilaterals with angles that all have the same measure. The second group has quadrilaterals with sides that all have the same length. Which quadrilateral does Skyler **not** have?

A.



B.



C.



D.



## Session 2—Math (Calculator)

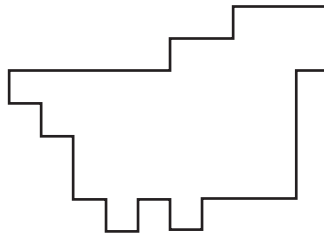
32. Use the number pattern below to answer the question.

24, 41, 58, 75, 92

Which statement about the number pattern is true?

- A. The rule is Add 3 to the second digit.
- B. The rule is Add 23 to the last number.
- C. An even number is added to find the next number.
- D. An odd number is added to find the next number.

33. Dia made a drawing. Her drawing is shown below.

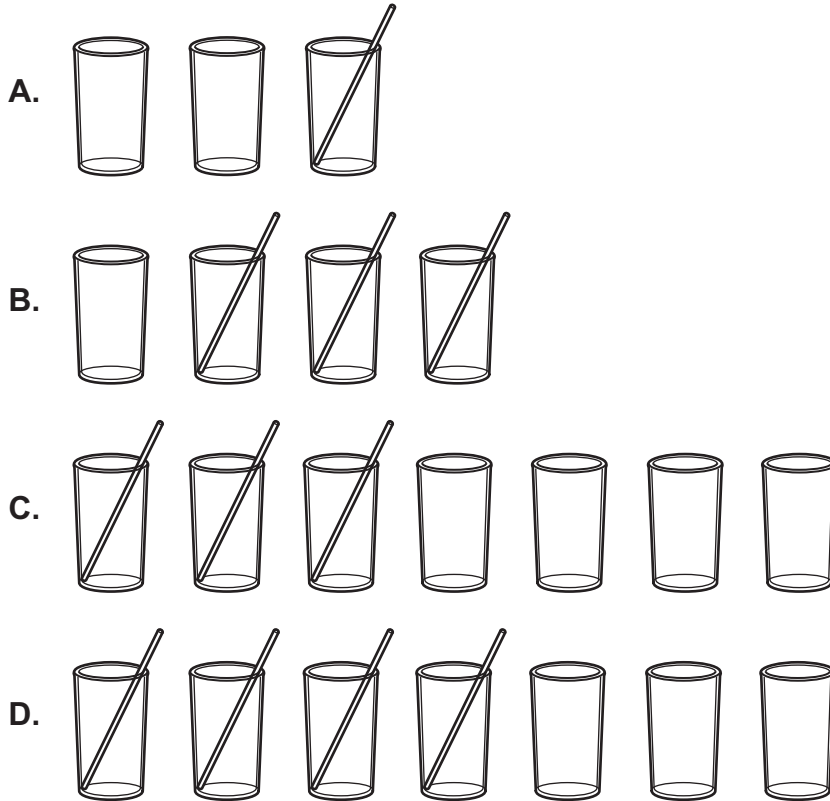


Which figure can be used to measure the area of Dia's drawing?

- A. •
- B. —
- C. △
- D. □

## Session 2—Math (Calculator)

34. Meg put a straw in  $\frac{3}{4}$  of the glasses on a table. Which model could show all the glasses on the table after Meg put in the straws?

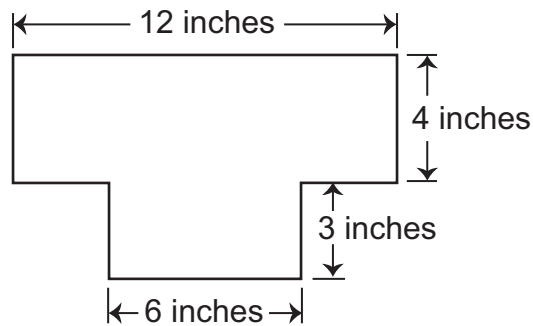


35. Dirk drew a shape. The shape has exactly 4 angles. The angles are **not** all the same size. Which shape could be the shape Dirk drew?

- A. parallelogram
- B. rectangle
- C. square
- D. triangle

## Session 2—Math (Calculator)

36. Peter is in a group of 25 people. All 25 people went fishing in boats. There were 5 people in each boat. How can Peter find the number of boats the group used?
- A. Add 5 to 25
  - B. Divide 25 by 5
  - C. Multiply 25 by 5
  - D. Subtract 5 from 25
37. Dezi made a poster in the shape shown below.



What is the area, in square inches, of Dezi's poster?

- A. 25 square inches
- B. 32 square inches
- C. 48 square inches
- D. 66 square inches

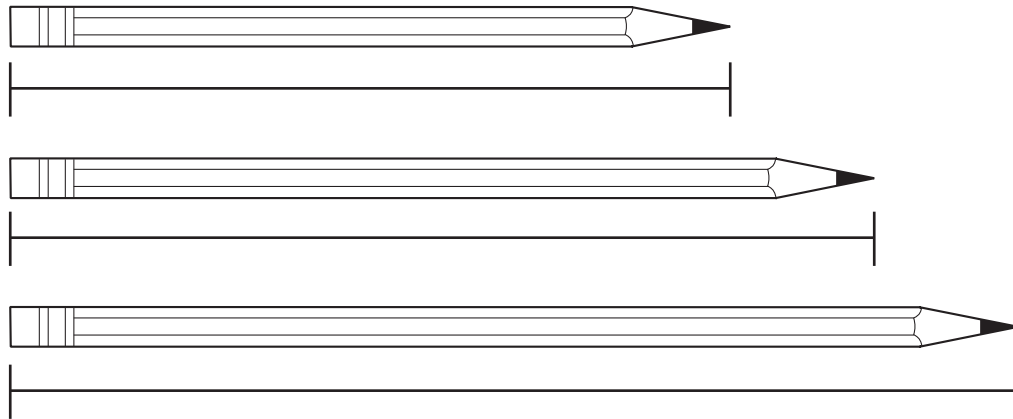


## Session 2—Math (Calculator)

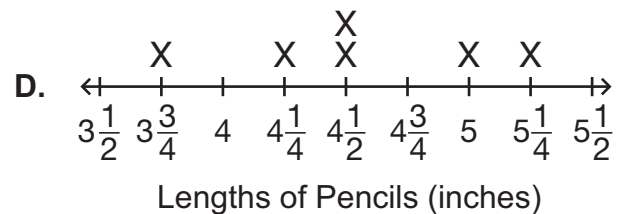
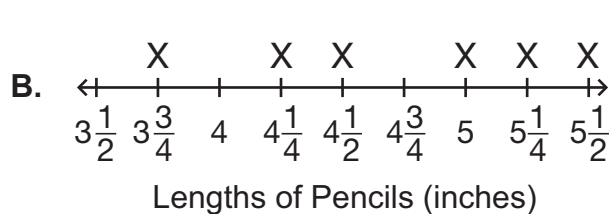
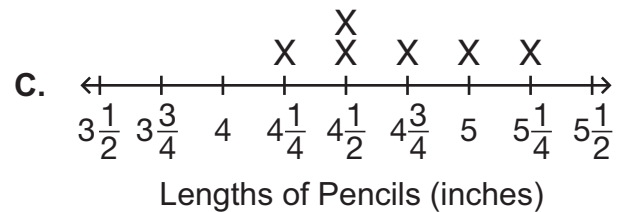
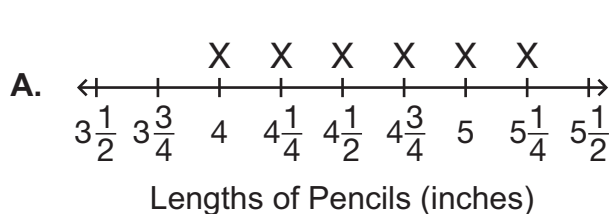
38. Chuck has six pencils. The lengths of three of his pencils are listed below.

$$4\frac{1}{2} \text{ inches, } 5 \text{ inches, } 4\frac{1}{4} \text{ inches}$$

The length of Chuck's other three pencils are shown in the diagram below.

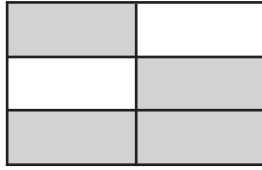


Which line plot shows the lengths, in inches, of Chuck's six pencils?



## Session 2—Math (Calculator)

39. Use the model below to answer the question.



What fraction of the model is shaded?

A.  $\frac{2}{4}$

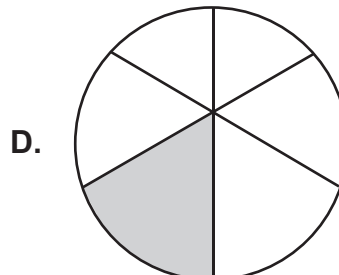
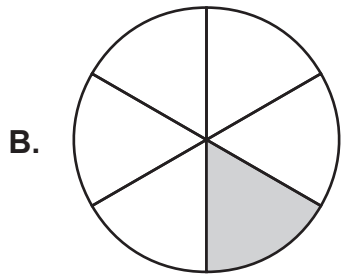
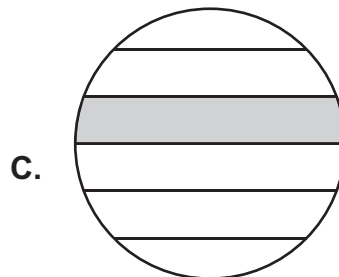
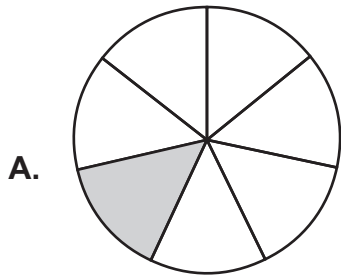
B.  $\frac{4}{6}$

C.  $\frac{4}{2}$

D.  $\frac{6}{4}$

40. Claire made a circle graph. The graph shows that  $\frac{1}{6}$  of the students in her class can whistle.

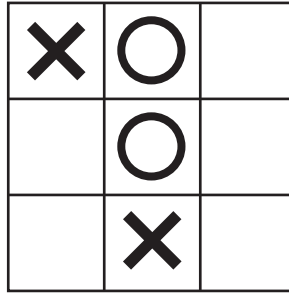
Which circle graph's shaded area shows the fraction of students in her class who can whistle?



## Session 2—Math (Calculator)

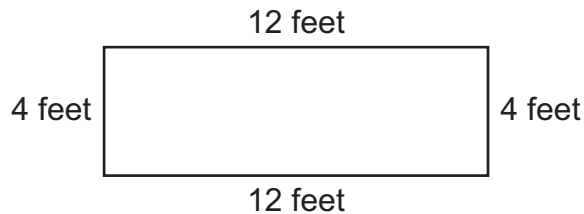
41. Isaac and Jana are playing tic-tac-toe on the game board shown below.

**Tic-Tac-Toe Game Board**



Each of the squares equals 1 square inch. What is the total area, in square inches, of the blank squares on the game board?

- A. 3 square inches
  - B. 4 square inches
  - C. 5 square inches
  - D. 9 square inches
42. Mr. Bennet drew the plan of his new garden as shown below.

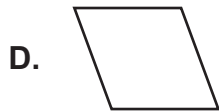
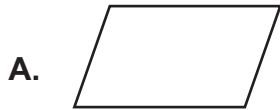


How many feet of fencing will Mr. Bennet need to go around his garden?

- A. 16 feet
- B. 24 feet
- C. 32 feet
- D. 48 feet

## Session 2—Math (Calculator)

43. John has 4 carrots. Sara has 2 more carrots than John. Darius has 3 times as many carrots as Sara. How many carrots does Darius have?
- A. 9  
B. 14  
C. 18  
D. 24
44. Mandy drew a quadrilateral that is a rhombus but **not** a square. Which quadrilateral could be the one that Mandy drew?

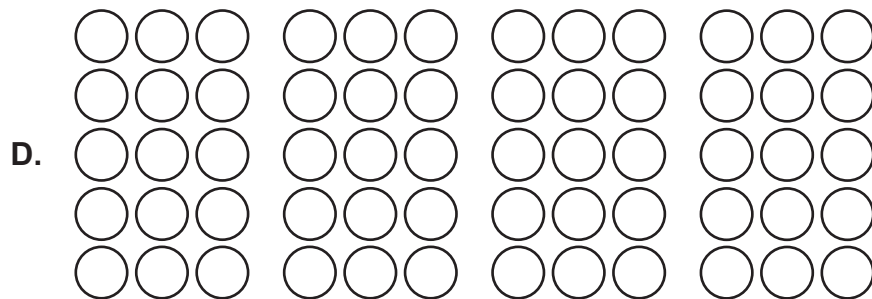
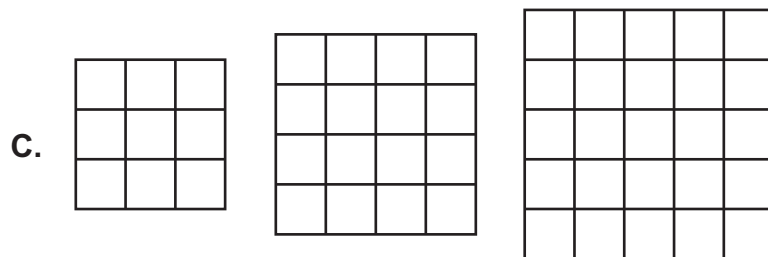
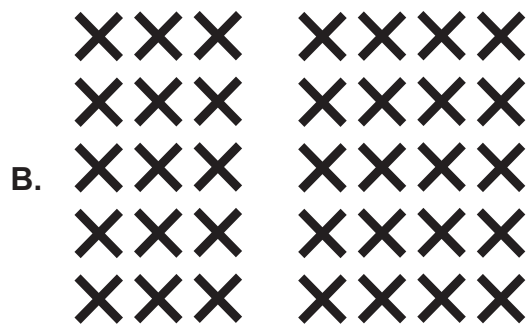
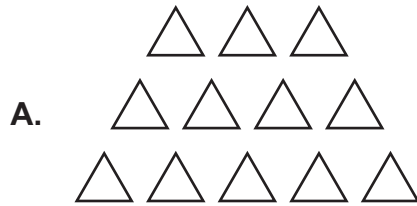


## Session 2—Math (Calculator)

45. Use the expression below to answer the question.

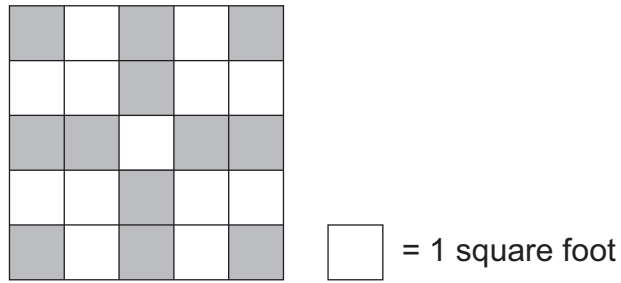
$$(3 + 4) \times 5$$

Which set of counters shows the expression above?



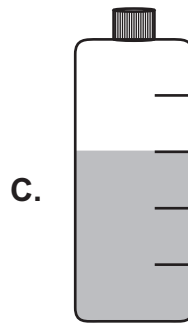
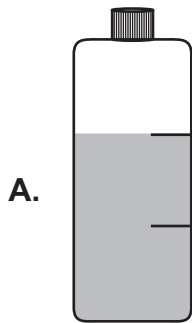
## Session 2—Math (Calculator)

46. Kelly made a quilt using square patches. Her quilt is shown below.



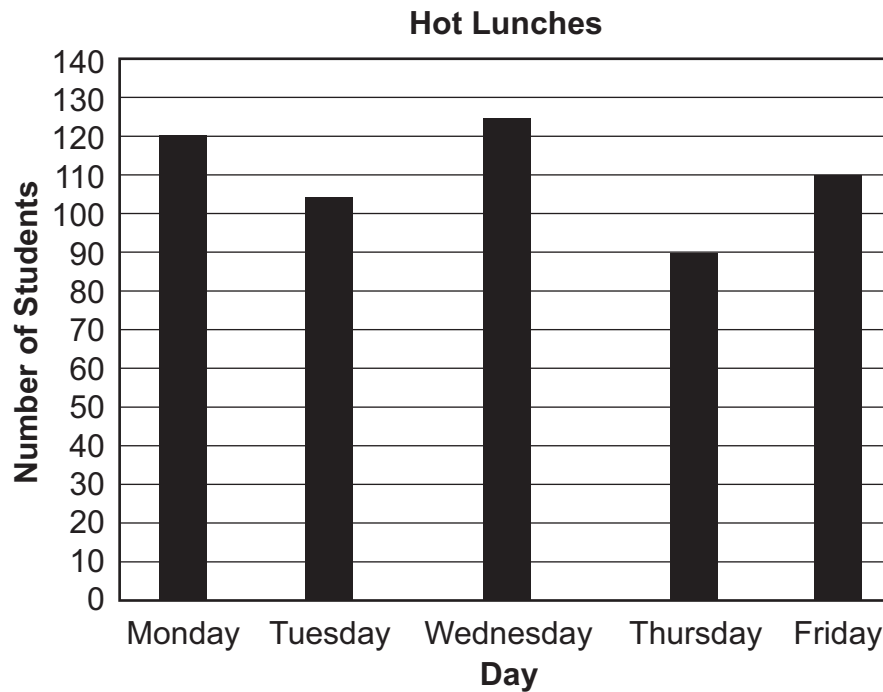
What is the area of her quilt?

- A. 20 square feet  
B. 24 square feet  
C. 25 square feet  
D. 26 square feet
47. Tim's shampoo bottle is about  $\frac{2}{3}$  full. Which picture shows the amount of shampoo in Tim's bottle?



## Session 2—Math (Calculator)

48. Use the bar graph below to answer the question.

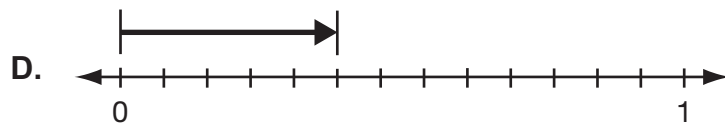
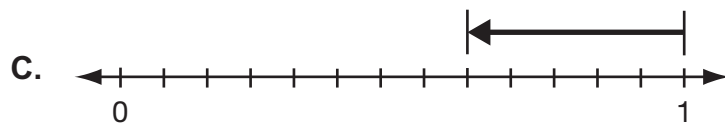
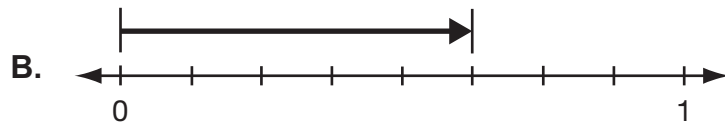
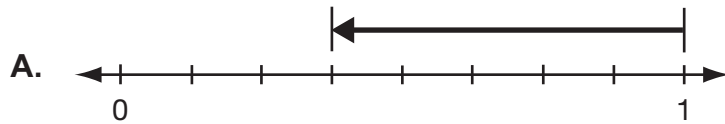


The bar graph shows the number of students who bought a hot lunch each day last week. How many more students bought a hot lunch on Monday than on Thursday?

- A. 15
- B. 30
- C. 35
- D. 50

## Session 2—Math (Calculator)

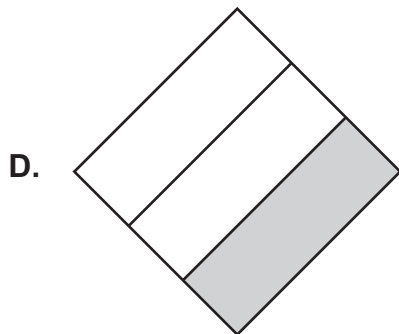
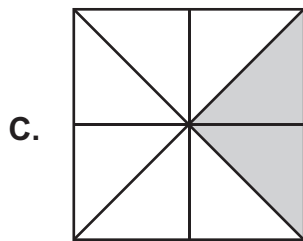
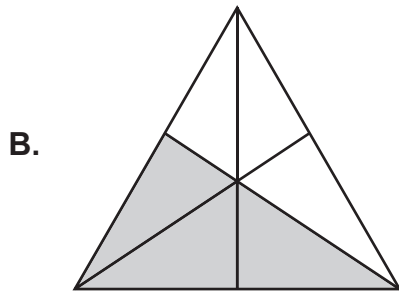
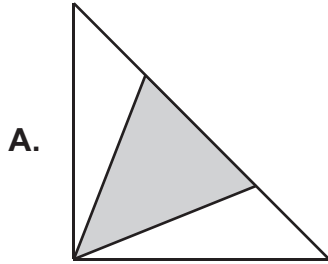
49. Cassi drew an arrow above a number line. The arrow is  $\frac{5}{8}$  of a unit long. She drew the arrow so it is pointing at the fraction  $\frac{5}{8}$ . Which arrow could be the one Cassi drew?





## Session 2—Math (Calculator)

50. Neil drew a shape. He divided it into equally-sized areas. Neil shaded  $\frac{1}{3}$  of the area of the shape. Which shape could be the one he drew?



---

## Math—Sessions 1, 2, and 3

### GENERAL INSTRUCTIONS

---

The Math test has three sessions, two with multiple-choice questions and one with a constructed-response question. You may **not** use a calculator for session 1, but you may use a calculator for sessions 2 and 3.

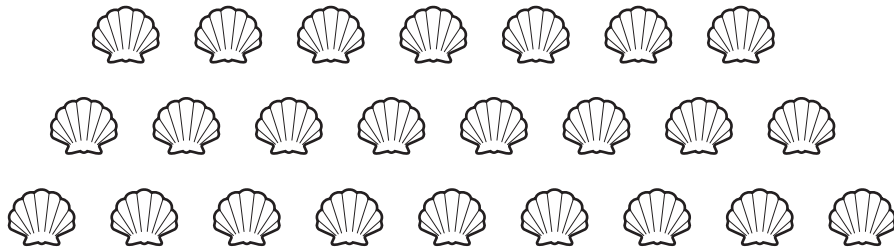
## Session 3—Math (Calculator)

Write your answers for question 51 in the spaces provided below. The question has more than one part. Show all the work you do to find your answers. Even if you cannot answer all parts, answer as many as you can. You may still get points for answering part of the question. Be sure to write clearly. You may review your work in this session, but do not work on any other session.



**You MAY use a calculator for this session.**

51. Ben went to the beach yesterday. He found the seashells shown below.



Ben gave them all away.

- A. Ben gave the seashells to 6 people. He gave the same number of seashells to each person. The first person he gave seashells to was Chad. Circle each of the seashells Ben gave to Chad. Explain how you found the number of seashells Ben gave to Chad.
- B. Ben goes to the beach again today. He finds the same number of seashells today as he did yesterday. This time, Ben gives all the seashells away to **more** than 6 people. Each person gets the same number of seashells. To how many people can Ben give the seashells? Show or explain how you found your answer.



---

# Multiple-Choice Answer Sheet

---

Name: \_\_\_\_\_



## Session 1

1. \_\_\_\_\_

16. \_\_\_\_\_

2. \_\_\_\_\_

17. \_\_\_\_\_

3. \_\_\_\_\_

18. \_\_\_\_\_

4. \_\_\_\_\_

19. \_\_\_\_\_

5. \_\_\_\_\_

20. \_\_\_\_\_

6. \_\_\_\_\_

21. \_\_\_\_\_

7. \_\_\_\_\_

22. \_\_\_\_\_

8. \_\_\_\_\_

23. \_\_\_\_\_

9. \_\_\_\_\_

24. \_\_\_\_\_

10. \_\_\_\_\_

25. \_\_\_\_\_

11. \_\_\_\_\_

26. \_\_\_\_\_

12. \_\_\_\_\_

27. \_\_\_\_\_

13. \_\_\_\_\_

28. \_\_\_\_\_

14. \_\_\_\_\_

29. \_\_\_\_\_

15. \_\_\_\_\_

30. \_\_\_\_\_

---

# Multiple-Choice Answer Sheet

---

Name: \_\_\_\_\_



## Session 2

31. \_\_\_\_\_

41. \_\_\_\_\_

32. \_\_\_\_\_

42. \_\_\_\_\_

33. \_\_\_\_\_

43. \_\_\_\_\_

34. \_\_\_\_\_

44. \_\_\_\_\_

35. \_\_\_\_\_

45. \_\_\_\_\_

36. \_\_\_\_\_

46. \_\_\_\_\_

37. \_\_\_\_\_

47. \_\_\_\_\_

38. \_\_\_\_\_

48. \_\_\_\_\_

39. \_\_\_\_\_

49. \_\_\_\_\_

40. \_\_\_\_\_

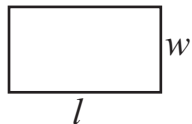
50. \_\_\_\_\_



## MATHEMATICS REFERENCE SHEET—GRADE 3

Use the information below to answer questions on the Math test.

**Rectangle**



$$\text{Area} = l \times w$$

$$\text{Perimeter} = l + l + w + w$$

---

# Multiple-Choice Answer Key

---

Name: \_\_\_\_\_



## Session 1

- |              |              |
|--------------|--------------|
| 1. <u>C</u>  | 16. <u>B</u> |
| 2. <u>C</u>  | 17. <u>B</u> |
| 3. <u>B</u>  | 18. <u>A</u> |
| 4. <u>B</u>  | 19. <u>C</u> |
| 5. <u>A</u>  | 20. <u>B</u> |
| 6. <u>A</u>  | 21. <u>D</u> |
| 7. <u>A</u>  | 22. <u>D</u> |
| 8. <u>B</u>  | 23. <u>B</u> |
| 9. <u>B</u>  | 24. <u>B</u> |
| 10. <u>C</u> | 25. <u>D</u> |
| 11. <u>A</u> | 26. <u>A</u> |
| 12. <u>A</u> | 27. <u>B</u> |
| 13. <u>C</u> | 28. <u>B</u> |
| 14. <u>C</u> | 29. <u>C</u> |
| 15. <u>D</u> | 30. <u>C</u> |

---

## Multiple-Choice Answer Key

---

Name: \_\_\_\_\_



### Session 2

31. B

41. C

32. D

42. C

33. D

43. C

34. B

44. D

35. A

45. B

36. B

46. C

37. D

47. A

38. D

48. B

39. B

49. B

40. B

50. D

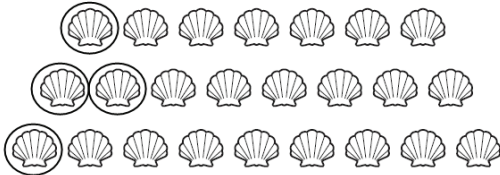


# Constructed-Response Scoring Rubrics



## Session 3

51.

Scoring Rubric	
4	The student earns 4 points.
3	The student earns 3 points.
2	The student earns 2 points.
1	The student earns 1 point OR demonstrates minimal understanding of the standard being measured.
0	The student's response is incorrect, irrelevant to the skill or standard being measured, or blank.
<b>Sample Answer:</b>	
<p>Part A.</p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> <p>(The student should circle 4 seashells in the picture.)</p> </div> </div> <p>Since there are 24 seashells total and he gave them to 6 people, I did <math>24 \div 6 = 4</math>. So Chad received 4 seashells.</p> <p>Part B. Ben found 24 seashells and <math>8 \times 3 = 24</math>. Since 8 is greater than 6, he can share with 8 people.</p>	
<b>Points Assigned:</b>	
<p>Part A. 2 points  1 point for circling 4 of the seashells in the picture  <b>AND</b>  1 point for giving a complete and accurate work or explanation of why 4 seashells is correct</p> <p>Part B. 2 points  1 point for 8, 12, or 24  <b>AND</b>  1 point for giving complete and accurate work or explanation of why 8, 12, or 24 is correct</p>	

# SAMPLE TEST

## MATHEMATICS



2007 Oregon Content Standards  
Grades 3 - 8

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# INTRODUCTION TO MATHEMATICS KNOWLEDGE AND SKILLS GRADE-LEVEL SAMPLE TESTS

## BACKGROUND

The Oregon Department of Education provides sample tests to demonstrate the content and types of questions students in grades 3, 4, 5, 6, 7, 8, and High School might encounter on the Oregon Assessment of Knowledge and Skills (multiple-choice), which is administered each year.

## ELIGIBLE CONTENT

These sample questions were taken from tests given in previous years. They were originally written to align to the 2002 Oregon Mathematics Grade-level Content Standards. A panel of content experts studied the items and selected the ones which best align to the 2007/2009 Mathematics Content Standards for grades 3-8 and high school. New for 2010-11, scores are reported out at three Score Reporting Categories each year. The titles of these SRCs changes from year to year, but describes the content for each year in general terms. The chart shows the SRCs for all grade levels.

	<b>Score Reporting Category 1</b>	<b>Score Reporting Category 2</b>	<b>Score Reporting Category 3</b>
<b>3</b>	<b>3.1 : Number and Operations</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.3 : Geometry and Measurement</b>
<b>4</b>	<b>4.1 : Number and Operations</b>	<b>4.2 : Number and Operations and Algebra</b>	<b>4.3 : Measurement</b>
<b>5</b>	<b>5.1 : Number and Operations and Data Analysis</b>	<b>5.2 : Number and Operations and Algebra</b>	<b>5.3 : Geometry, Measurement, and Algebra</b>
<b>6</b>	<b>6.1 : Number and Operations</b>	<b>6.2 : Number and Operations and Probability</b>	<b>6.3 : Algebra</b>
<b>7</b>	<b>7.1 : Number and Operations and Algebra</b>	<b>7.2 : Number and Operations, Algebra and Geometry</b>	<b>7.3 : Measurement and Geometry</b>
<b>8</b>	<b>8.1 : Algebra</b>	<b>8.2 : Data Analysis and Algebra</b>	<b>8.3 : Geometry and Measurement</b>
<b>HS</b>	<b>H.A : Algebra and Numeracy</b>	<b>H.G : Geometry</b>	<b>H.S : Data Analysis</b>

As in the operational assessment, students are **strongly encouraged** to use the calculator with which they are most familiar when taking the sample test.

The answer key provided at the end of the sample test booklet identifies which of these categories each question is designed to assess. Because the item calibrations (RIT) are not accurate for the new standards, we are not able to provide a Raw-to-RIT chart as we had in the past.

The same weighting across the three Score Reporting Categories of mathematics content is used in both sample and operational tests, as much as possible. This chart shows the approximate percent weighting of SRCs by grade level:

Grade	Score Reporting Category 1	Weight	Score Reporting Category 2	Weight	Score Reporting Category 3	Weight
3	Number and Operations	35%	Number and Operations, Algebra, and Data Analysis	35%	Geometry and Measurement	30%
4	Number and Operations	35%	Number and Operations and Algebra	35%	Measurement	30%
5	Number and Operations and Data Analysis	35%	Number and Operations and Algebra	35%	Geometry, Algebra, and Measurement	30%
6	Number and Operations	35%	Number and Operations and Probability	35%	Algebra	30%
7	Number and Operations and Algebra	35%	Number and Operations, Algebra and Geometry	35%	Measurement and Geometry	30%
8	Algebra	40%	Data Analysis and Algebra	30%	Geometry and Measurement	30%
HS	Algebra	50%	Geometry	30%	Statistics	20%

### WHY PROVIDE STUDENTS WITH A SAMPLE TEST?

Most students feel some anxiety as they approach a test. It is important that students know what to expect when they take the OAKS tests. The sample tests are intended to help students approach the state tests with confidence – comfortable with the test format and familiar with test-taking strategies to help them achieve the best possible score.

### CONTENTS OF THE SAMPLE TEST:

This overview of the purpose for sample tests is followed by a list of test-taking tips. The sample test formatting is similar to that of the operational OAKD Online mathematics test. A “fill-in-the-bubble” answer sheet for the students to use follows the actual sample test. The answer key identifies the correct answer, the score reporting category represented, and the code of the content standard to which the item aligns. The sample test has fewer items than the actual assessment, and may not be used in place of the operational assessment.

## USING THE SAMPLE TEST:

**Teachers** often have their students take the test as a “practice” activity in preparation for the actual Statewide Assessment. The answer key could be removed prior to making copies of the sample test for student practice. Copies of the answer key could then be provided to students to check their work or to take home and share with parents.

It is important to remember that **students are encouraged to use their calculators and any mathematics manipulatives** on the test. Providing these tools in class and encouraging students to use them during the sample test may be very beneficial in encouraging students to take their time and use the appropriate tools to help them solve problems during the actual test administration. In fact, teachers may want to demonstrate how various tools could be used to solve the multiple-choice problems as part of the practice test activities.

Teachers may use the overall class results to target areas of instruction needing further attention.

**Parents** may find the sample test helpful in clarifying the types of questions their child will encounter on the multiple-choice test. Parents could also assist their child in preparing for the test by practicing at home. The list of test-taking tips gives parents suggestions on ways to reduce test anxiety and promote good study and health habits in preparation for testing.

**Students** may wish to use the test independently to practice before the actual test administration, checking their own responses against the answer key provided at the end of the booklet. Students may benefit from re-reading the problems and analyzing both the correct and incorrect answers to the multiple-choice questions they missed.

**Building principals, superintendents, district testing coordinators, curriculum leaders and others** may find the sample test useful in communicating with parents, school site councils, and other community members. Parts of the sample test could be included in a newsletter or shared at meetings of local community groups to help constituents better understand the state assessment system. Although the sample tests are not as comprehensive as the complete tests administered in the Statewide Assessment, they do provide a **sampling** of the subject area content and difficulty levels students may encounter as a part of Oregon’s high academic standards.

### Assessment Conditions

If the practice test is to be administered in “test-like” conditions, the following steps need to be followed:

- post a “testing, do not disturb” sign on the window or door of the classroom
- go over any directions (e.g., students are to complete the entire test or only a portion of the test at one sitting)
- expect the students to work by themselves with no talking during the assessment
- monitor student activities during the assessment
- provide any of the appropriate accommodations or modifications students use during instruction and might need during testing
- expect all students to participate

## TEST-TAKING TIPS

### BEFORE THE TEST

- Develop a positive attitude. Tell yourself, “I will do my best on this test.”
- Get a good night’s sleep the night before the test.
- Get up early enough to avoid hurrying to get ready for school.
- Eat a good breakfast (and lunch, if your test is in the afternoon).


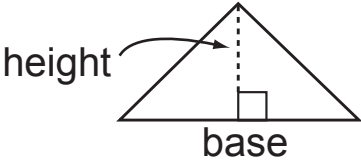
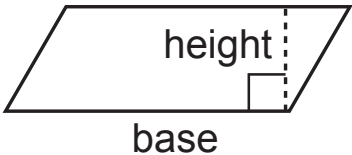
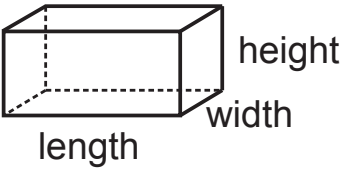
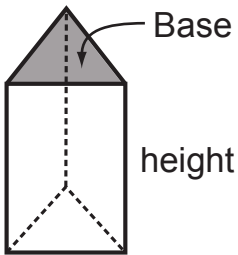
### DURING THE TEST

- Stay calm.
- Listen carefully to directions.
- Read each test question and all the answer choices carefully.
- Eliminate any obvious wrong answers
- Solve the problem using paper and pencil, a calculator or by using manipulatives. See if your answer is similar to one of the choices given.
- Pace yourself. If you come to a difficult question, it may be better to skip it and go on. Then come back and focus on the difficult questions one at a time.
- Just like the Statewide Assessment, this is not a timed test. If you need more time to finish the test, notify your teacher.
- Remember the test questions are not necessarily arranged by difficulty. If you get to a question you think is too hard, that doesn’t mean the rest of the test questions will also be too hard.
- The teachers who write the test questions use “commonly made mistakes” to identify good distractors, so finding an answer like yours is not a guarantee that it is the correct answer.
- If you are not sure of an answer to a question, try these tips:
  - ◊ Cross out the answers you know are not correct and choose among the rest.
  - ◊ Read through all the answers very carefully, and then go back to the question. Sometimes you can pick up clues just by thinking about the different answers you have to choose from.
  - ◊ If you get stuck on a question, skip it and come back later.
  - ◊ It is OK to guess on this test. Try to make your best guess, but make sure you answer all questions.

### AFTER THE TEST

- Before you turn your test in, check it over. Change an answer only if you have a good reason. Generally it is better to stick with your first choice.
- Make sure you have marked an answer for every question, even if you had to guess.

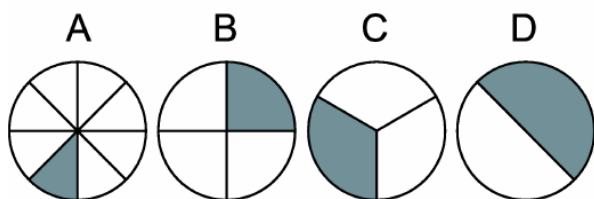
**ADDITIONAL INFORMATION** on mathematics assessment may be obtained by contacting James Leigh, Mathematics Assessment Specialist, email to: [James.Leigh@state.or.us](mailto:James.Leigh@state.or.us)

MEASUREMENTS	<p>1 meter = 100 centimeters    1 gram = 1000 milligrams    1 liter = 1000 cubic centimeters  1 kilometer = 1000 meters    1 kilogram = 1000 grams</p> <p>1 yard = 3 feet                      1 pound = 16 ounces                      1 cup = 8 fluid ounces  1 mile = 5280 feet                      1 ton = 2000 pounds                      1 pint = 2 cups  1 hour = 60 minutes                      1 quart = 2 pints  1 minute = 60 seconds                      1 gallon = 4 quarts</p>	
AREA	 <p>Area = length × width</p>	 <p>Area = base × height ÷ 2</p>
	 <p>Area = base × height</p>	
SURFACE AREA and VOLUME	 <p>Surface Area = sum of area of all faces  Volume = length × width × height</p>	 <p>Surface Area = Sum of Areas of all faces  Volume = Area of Base × height</p>



## 2010-2013 Mathematics Sample Test – Grade 3

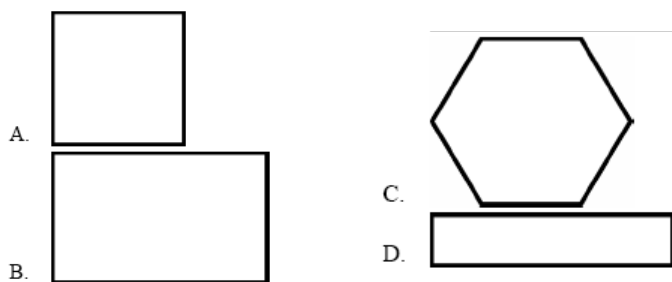
1. Mike wanted the biggest piece of pie.  
Which one of the shaded pieces should he choose?



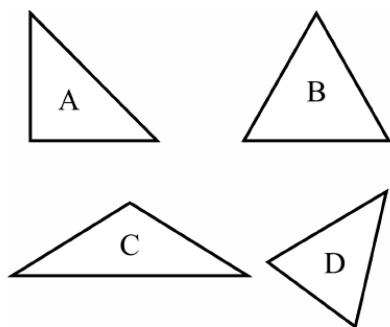
2. Maria has 14 tables. Each table needs 4 chairs.  
How many chairs does Maria need?

- A. 14  
B. 16  
C. 28  
D. 56

3. Which shape is NOT a quadrilateral?

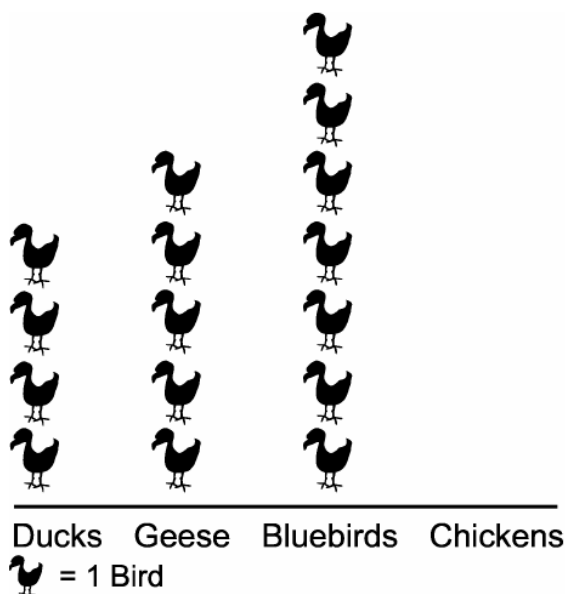


4. In which triangle is there a right angle?



## 2010-2013 Mathematics Sample Test – Grade 3

5. According to Mr. Quan's pictograph, how many birds does each symbol represent?



- A. 0  
 B. 1  
 C. 4  
 D. 7
6. Which two problems have the same answer?

- A.  $5 \times 8 = \underline{\quad}$        $2 \times (10 \times 2) = \underline{\quad}$   
 B.  $3 \times 7 = \underline{\quad}$        $(7 \times 2) \times 3 = \underline{\quad}$   
 C.  $6 \times 3 = \underline{\quad}$        $9 \times (1 - 1) = \underline{\quad}$   
 D.  $4 \times 8 = \underline{\quad}$        $(2 \times 1) \times 4 = \underline{\quad}$

7. Chad had one candy bar to share with 4 friends. He divided the candy bar into 6 equal pieces. There was one extra piece, so Chad took it also. What fraction of the candy bar did Chad take in all?



- A.  $\frac{1}{6}$   
 B.  $\frac{2}{6}$   
 C.  $\frac{1}{5}$   
 D.  $\frac{1}{4}$

## 2010-2013 Mathematics Sample Test – Grade 3

8. Look at these amounts of money.  
What is the pattern?

92¢ 84¢ 76¢ 68¢ 60¢

- A. Add 9¢ each time.
- B. Subtract 9¢ each time.
- C. Subtract 8¢ each time.
- D. Add 9¢, then subtract 2¢ each time.

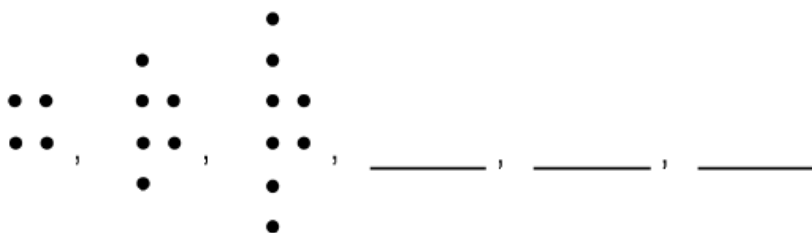
9. John has a puzzle. His brother completed  $\frac{2}{8}$  of the puzzle this morning. John completed

$\frac{3}{8}$  more by lunch time.

How much of the puzzle has been completed?

- A.  $\frac{6}{64}$
- B.  $\frac{5}{16}$
- C.  $\frac{3}{8}$
- D.  $\frac{5}{8}$

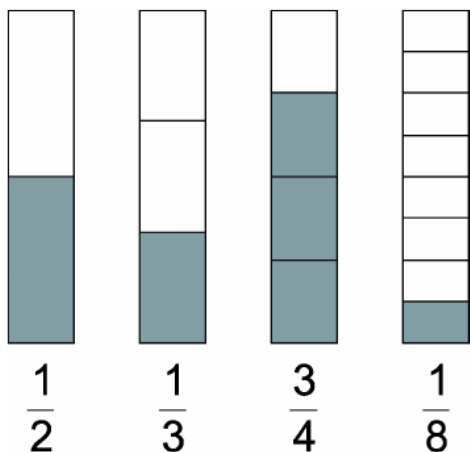
10. When continuing this pattern, how many dots would be needed in each of the next three figures?



- A. 6, 10, 12
- B. 10, 12, 14
- C. 8, 10, 12
- D. 6, 7, 8

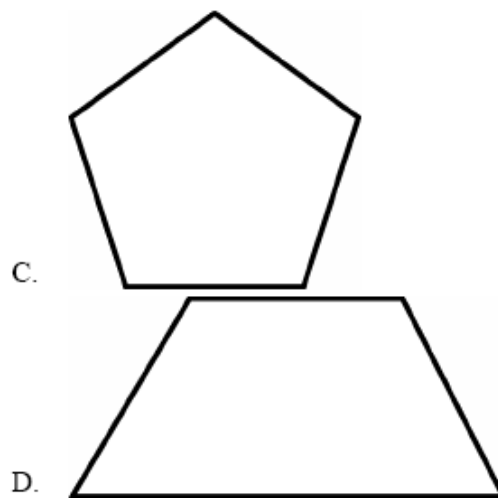
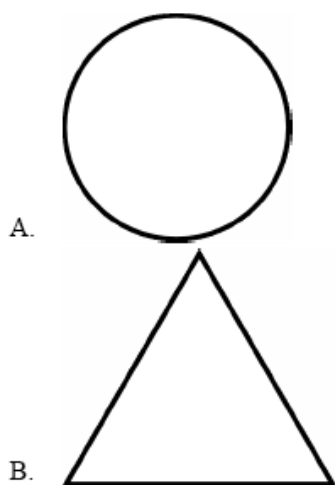
## 2010-2013 Mathematics Sample Test – Grade 3

11. Order the fractions from least to greatest:



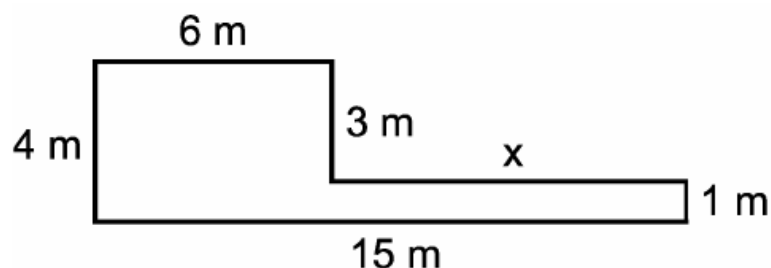
- A.  $\frac{1}{2}, \frac{1}{8}, \frac{1}{3}, \frac{3}{4}$   
B.  $\frac{1}{8}, \frac{1}{3}, \frac{1}{2}, \frac{3}{4}$   
C.  $\frac{1}{2}, \frac{1}{3}, \frac{3}{4}, \frac{1}{8}$   
D.  $\frac{3}{4}, \frac{1}{2}, \frac{1}{3}, \frac{1}{8}$

12. Which of the following shapes is a quadrilateral?

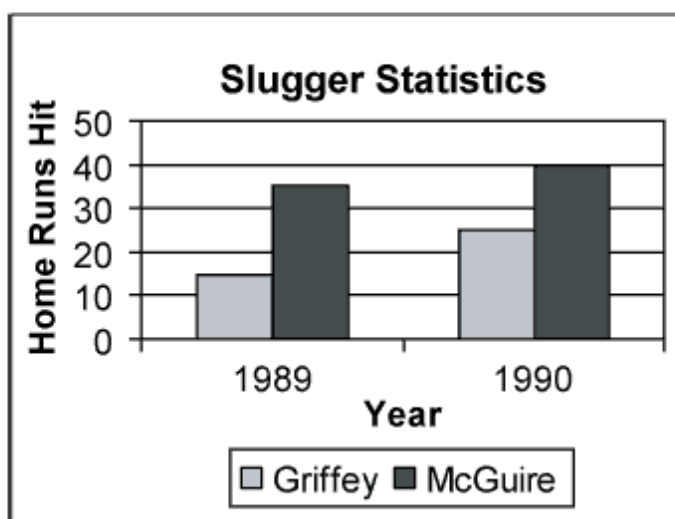


## 2010-2013 Mathematics Sample Test – Grade 3

13. What is the length of side  $x$ ?



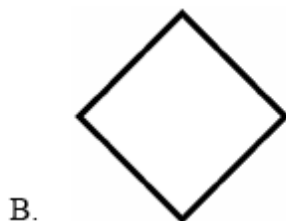
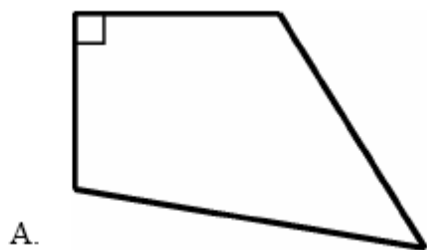
- A. 8 m  
B. 9 m  
C. 21 m  
D. 22 m
14. According to the chart, which statement is true for a player's home run total improvement from 1989 to 1990?



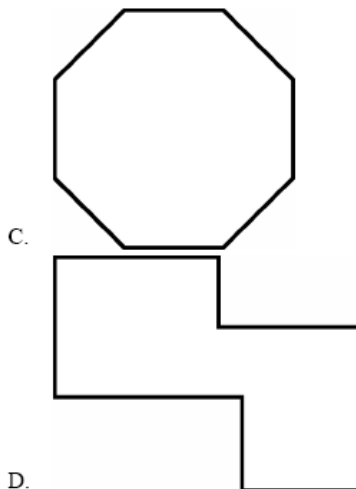
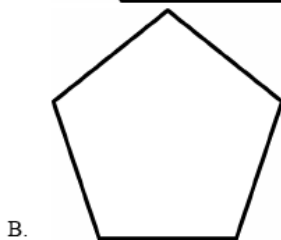
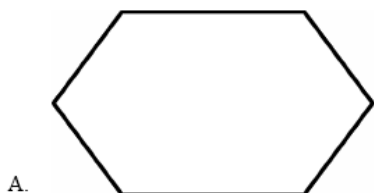
- A. McGuire improved by 5 home runs.  
B. Griffey improved by 15 home runs.  
C. McGuire improved by 15 home runs.  
D. Griffey improved by 20 home runs.

## 2010-2013 Mathematics Sample Test – Grade 3

15. Determine which geometric shape has exactly 2 acute angles and 2 obtuse angles?



16. Which of these figures is a hexagon?



17. What is the missing number in this pattern?

1, 3, 7, 15, \_\_\_\_, 63

- A. 23  
B. 30  
C. 31  
D. 45

### 2010-2013 Mathematics Sample Test – Grade 3

18. Bob emails Matt every 3 days. Carl emails Matt every 4 days. Dave emails Matt every 6 days. Matt gets an email from each today. How often will Matt receive email from all three on the same day?
- A. Every 6<sup>th</sup> day
  - B. Every 12<sup>th</sup> day
  - C. Every 13<sup>th</sup> day
  - D. Every 72<sup>nd</sup> day
19. Ken has some granola bars: 7 are peanut butter, 11 are raisin and 9 are chocolate chip. What fractional amount of the granola bars are chocolate chip?
- A. 9
  - B.  $\frac{9}{3}$
  - C.  $\frac{9}{18}$
  - D.  $\frac{1}{3}$
20. Which quadrilateral does not always have two pairs of parallel sides?
- A. Rectangle
  - B. Square
  - C. Rhombus
  - D. Trapezoid

# Oregon Mathematics Sample Test

Use number 2 pencil.  
Do NOT use ink or ball point pen.  
Make heavy dark marks that completely fill the circle.  
Erase completely any marks you wish to change.

Name of Student

\_\_\_\_\_

Name of Teacher

\_\_\_\_\_

Name of School

\_\_\_\_\_

1    ☐ A   ☐ B   ☐ C   ☐ D

2    ☐ A   ☐ B   ☐ C   ☐ D

3    ☐ A   ☐ B   ☐ C   ☐ D

4    ☐ A   ☐ B   ☐ C   ☐ D

5    ☐ A   ☐ B   ☐ C   ☐ D

6    ☐ A   ☐ B   ☐ C   ☐ D

7    ☐ A   ☐ B   ☐ C   ☐ D

8    ☐ A   ☐ B   ☐ C   ☐ D

9    ☐ A   ☐ B   ☐ C   ☐ D

10   ☐ A   ☐ B   ☐ C   ☐ D

11   ☐ A   ☐ B   ☐ C   ☐ D

12   ☐ A   ☐ B   ☐ C   ☐ D

13   ☐ A   ☐ B   ☐ C   ☐ D

14   ☐ A   ☐ B   ☐ C   ☐ D

15   ☐ A   ☐ B   ☐ C   ☐ D

16   ☐ A   ☐ B   ☐ C   ☐ D

17   ☐ A   ☐ B   ☐ C   ☐ D

18   ☐ A   ☐ B   ☐ C   ☐ D

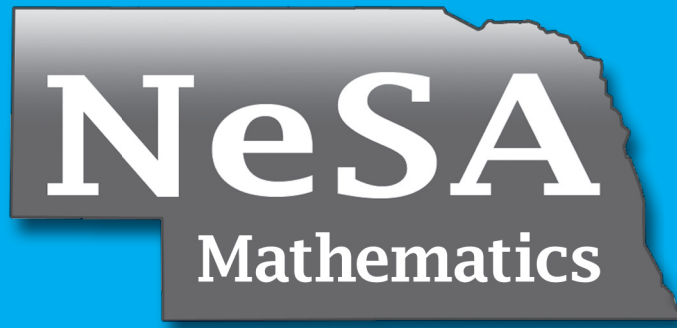
19   ☐ A   ☐ B   ☐ C   ☐ D

20   ☐ A   ☐ B   ☐ C   ☐ D



We are not able to provide a Raw-to-RIT chart as we had in the past. Many of the items were initially calibrated under the old standards for different grades, and these items do not cover all of the new standards. Since the item calibrations (RIT) are not accurate for the new standards, any attempt to convert a raw score to a RIT score would not be valid.

<b>Item Number</b>	<b>Answer Key</b>	<b>Score Reporting Category</b>	<b>2007 Grade 3 Content Standard</b>
<b>1</b>	<b>D</b>	<b>3.1 : Number and Operations</b>	<b>3.1.4</b>
<b>2</b>	<b>D</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.3</b>
<b>3</b>	<b>C</b>	<b>3.3 : Geometry and Measurement</b>	<b>3.3.3</b>
<b>4</b>	<b>A</b>	<b>3.3 : Geometry and Measurement</b>	<b>3.3.1</b>
<b>5</b>	<b>B</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.7</b>
<b>6</b>	<b>A</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.4</b>
<b>7</b>	<b>B</b>	<b>3.1 : Number and Operations</b>	<b>3.1.1</b>
<b>8</b>	<b>C</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.6</b>
<b>9</b>	<b>D</b>	<b>3.1 : Number and Operations</b>	<b>3.1.6</b>
<b>10</b>	<b>B</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.6</b>
<b>11</b>	<b>B</b>	<b>3.1 : Number and Operations</b>	<b>3.1.4</b>
<b>12</b>	<b>D</b>	<b>3.3 : Geometry and Measurement</b>	<b>3.3.3</b>
<b>13</b>	<b>B</b>	<b>3.3 : Geometry and Measurement</b>	<b>3.3.8</b>
<b>14</b>	<b>A</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.7</b>
<b>15</b>	<b>C</b>	<b>3.3 : Geometry and Measurement</b>	<b>3.3.1</b>
<b>16</b>	<b>A</b>	<b>3.3 : Geometry and Measurement</b>	<b>3.3.4</b>
<b>17</b>	<b>C</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.6</b>
<b>18</b>	<b>B</b>	<b>3.2 : Number and Operations, Algebra, and Data Analysis</b>	<b>3.2.1</b>
<b>19</b>	<b>D</b>	<b>3.1 : Number and Operations</b>	<b>3.1.5</b>
<b>20</b>	<b>D</b>	<b>3.3 : Geometry and Measurement</b>	<b>3.3.3</b>



# **Nebraska State Accountability**

**Grade 5  
Mathematics  
Practice Test**

**Name:**

**Directions:**

On the following pages of your test booklet are questions for the Grade 5 Practice Test, a practice opportunity for the *Nebraska State Accountability–Mathematics (NeSA–M)*.

Multiple choice questions will ask you to select an answer from among four choices. For some questions, there may be two parts, Part A and Part B, where each part has a multiple choice question that will ask you to select an answer from among four choices. Multiple select questions will ask you to select multiple correct answers from among five or six answer choices. These types of questions may be found in your test booklet.

For all questions:

- Read each question carefully and choose the best answer.
- You may use scratch paper to solve the problems.
- You may not use a calculator on this test.
- Be sure to answer ALL the questions.

For multiple choice questions, only one of the answers provided is the correct response. For multiple select questions, more than one of the answers provided may be a correct response.

1. What is  $\frac{1}{4} \div 3$ ?

A.  $\frac{1}{12}$

B.  $\frac{3}{4}$

C.  $\frac{4}{3}$

D. 12

2. Billy jumps 4 yards. What is the length of his jump, in inches?

A. 40

B. 48

C. 124

D. 144

3. What is 9,887 rounded to the nearest thousand?

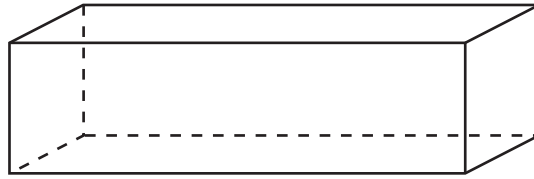
A. 9,000

B. 9,800

C. 9,900

D. 10,000

4. Use the picture below to answer the question.



How many edges does the right rectangular prism have?

- A. 6
  - B. 8
  - C. 10
  - D. 12
5. Which set of steps shows the sum of  $\frac{2}{3} + \frac{3}{4}$  in simplest form?

A.  $\frac{2}{3} + \frac{3}{4} \rightarrow \frac{8}{12} + \frac{9}{12} \rightarrow \frac{17}{12} \rightarrow 1\frac{5}{12}$

B.  $\frac{2}{3} + \frac{3}{4} \rightarrow \frac{5}{7} + \frac{5}{7} \rightarrow \frac{10}{7} \rightarrow 1\frac{3}{7}$

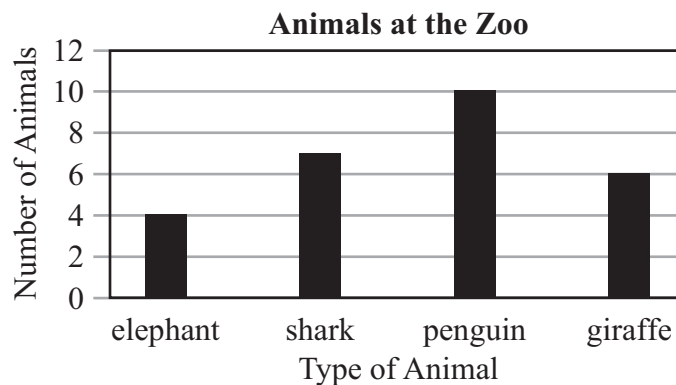
C.  $\frac{2}{3} + \frac{3}{4} \rightarrow \frac{6}{12} + \frac{12}{12} \rightarrow \frac{18}{12} \rightarrow 1\frac{1}{2}$

D.  $\frac{2}{3} + \frac{3}{4} \rightarrow \frac{8}{12} + \frac{9}{12} \rightarrow \frac{17}{12} \rightarrow 1\frac{7}{12}$

6. Which is true?

- A.  $4.09 > 4.50$
- B.  $2.31 > 2.18$
- C.  $5.23 < 5.14$
- D.  $6.80 < 6.29$

7. Use the graph below to answer the question.

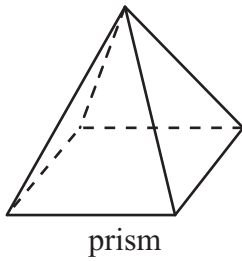


Which conclusion is true?

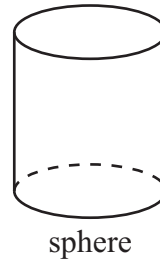
- A. There are six more giraffes than penguins.
  - B. There are two more elephants than giraffes.
  - C. There are three more penguins than sharks.
  - D. There are eight more penguins than elephants.
8. What is  $4,376 \div 36$ ?
- A. 121
  - B. 121R20
  - C. 122
  - D. 122R16

9. Which figure is labeled correctly?

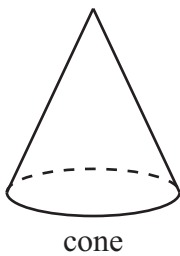
A.



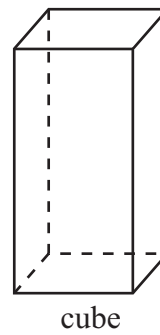
B.



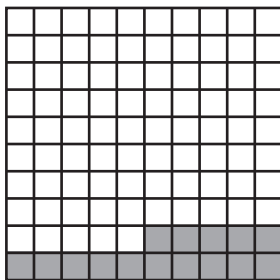
C.



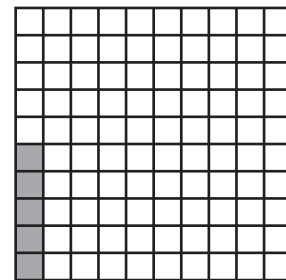
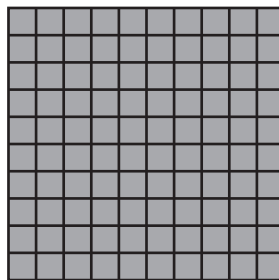
D.



10. Use the graphic below to answer the question.



+



What is the sum of the fractions represented by the blocks?

- A. 0.12
- B. 1.155
- C. 1.2
- D. 1.65

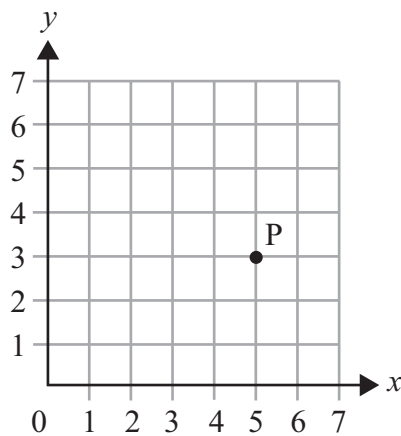
11. Which number does  $10^5$  represent?
- A. 50
  - B. 500
  - C. 10,000
  - D. 100,000
12. A recipe calls for  $\frac{1}{4}$  pound of nuts,  $\frac{1}{8}$  pound of candy pieces, and  $\frac{1}{3}$  pound of dried fruit. What is the total weight, in pounds, of nuts, candy pieces, and dried fruit the recipe calls for?
- A.  $\frac{1}{15}$
  - B.  $\frac{3}{15}$
  - C.  $\frac{17}{24}$
  - D.  $\frac{17}{8}$
13. What is the product of  $18 \times 24$ ?
- A. 108
  - B. 128
  - C. 432
  - D. 632



14. What is the standard form of forty-five and nine tenths?

- A. 45.009
- B. 45.09
- C. 45.9
- D. 45.910

15. Use the coordinate grid below to answer the question.



What are the coordinates of point P?

- A. (3, 5)
- B. (5, 3)
- C. (5, 4)
- D. (6, 3)

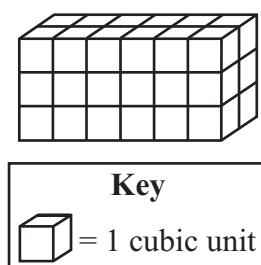
16. When solving the expression  $4 + 6 \div 2 \times 5 - 3$ , which operation is performed first?

- A.  $4 + 6$
- B.  $6 \div 2$
- C.  $2 \times 5$
- D.  $5 - 3$

17. Which shows  $\frac{3}{4}$  as a decimal?

- A. 0.25
- B. 0.34
- C. 0.43
- D. 0.75

18. Use the figure below to answer the question.



What is the volume of the figure?

- A. 11 units<sup>3</sup>
- B. 27 units<sup>3</sup>
- C. 34 units<sup>3</sup>
- D. 36 units<sup>3</sup>

19. What is  $170 \times 10$ ?

- A. 17
- B. 170
- C. 1,700
- D. 17,000

20. Which set of ordered pairs could be generated by the rule  $y = 7x$ ?

- A. (0, 7), (1, 14), (3, 28)
- B. (1, 7), (2, 14), (4, 28)
- C. (7, 0), (14, 1), (28, 3)
- D. (7, 1), (14, 2), (28, 4)

21. This question has two parts. Answer part A, and then answer part B.

**Part A**

Use the equation below to answer part A.

$$14 \times 10^? = 140,000$$

What is the missing number that makes the equation true?

- A. 2
- B. 4
- C. 6
- D. 8

**Part B**

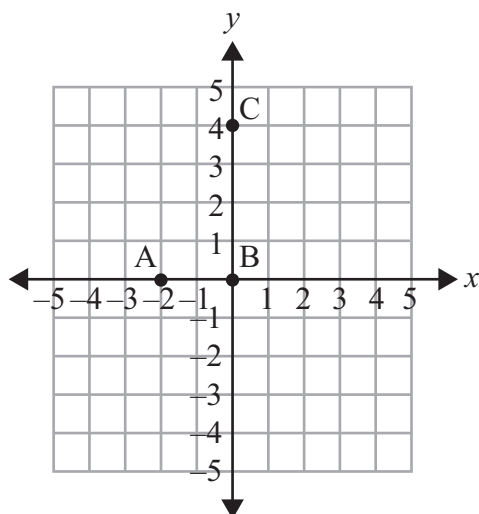
Use the equation below to answer part B.

$$4,800,000 \div 10^? = 480$$

What is the missing number that makes the equation true?

- A. 4
- B. 5
- C. 6
- D. 7

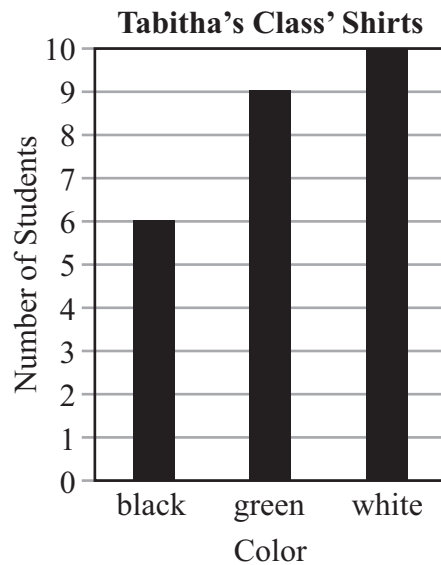
22. Use the graph below to answer the question.



Select **all** of the statements that are true. Select **all**.

- A. Point B is located at the origin.
- B. Point A is located only on the  $x$ -axis.
- C. Point C is located only on the  $y$ -axis.
- D. Point A is located on both the  $x$ -axis and  $y$ -axis.
- E. Point B is not located on either the  $x$ -axis or  $y$ -axis.

23. Use the bar graph below to answer the question.



The bar graph represents the numbers of students in a class wearing black, green, and white shirts. Select **all** of the statements that are true. Select **all**.

- A. There is a total of 6 students in the class wearing green shirts.
- B. There is a total of 10 students in the class wearing white shirts.
- C. There is a total of 25 students in the class wearing black, green, or white shirts.
- D. There is a total of 15 students in the class wearing either a black shirt or a green shirt.
- E. There is a total of 19 students in the class wearing either a black shirt or a white shirt.

# NeSA-M Grade 5 Reference Sheet



Shape	Area	Perimeter
Rectangle	$A = l \times w$	$P = 2l + 2w$
Square	$A = s \times s$	$P = s + s + s + s$

Key	
$l$ = length	$s$ = side length
$w$ = width	

Standard Units	Metric Units
<b>Conversions – Length</b>	
1 foot (ft) = 12 inches (in.)	1 centimeter (cm) = 10 millimeters (mm)
1 yard (yd) = 3 feet (ft) = 36 inches (in.)	1 meter (m) = 100 centimeters (cm)
1 mile (mi) = 1,760 yards (yd) = 5,280 feet (ft)	1 meter (m) = 1,000 millimeters (mm)
	1 kilometer (km) = 1,000 meters (m)
<b>Conversions – Volume</b>	
1 cup = 8 fluid ounces (fl oz)	1 liter (l) = 1,000 milliliters (ml)
1 pint (pt) = 2 cups	1 liter (l) = 1,000 cubic centimeters (cu. cm)
1 quart (qt) = 2 pints (pt)	
1 gallon (gal.) = 4 quarts (qt)	
<b>Conversions – Weight/Mass</b>	
1 pound (lb) = 16 ounces (oz)	1 gram (g) = 1,000 milligrams (mg)
1 ton = 2,000 pounds (lb)	1 kilogram (kg) = 1,000 grams (g)

**Grade 5  
Mathematics Practice Test  
Answer Key**

<b>Sequence</b>	<b>Key</b>	<b>Points</b>
<b>1</b>	<b>A</b>	<b>1</b>
<b>2</b>	<b>D</b>	<b>1</b>
<b>3</b>	<b>D</b>	<b>1</b>
<b>4</b>	<b>D</b>	<b>1</b>
<b>5</b>	<b>A</b>	<b>1</b>
<b>6</b>	<b>B</b>	<b>1</b>
<b>7</b>	<b>C</b>	<b>1</b>
<b>8</b>	<b>B</b>	<b>1</b>
<b>9</b>	<b>C</b>	<b>1</b>
<b>10</b>	<b>C</b>	<b>1</b>
<b>11</b>	<b>D</b>	<b>1</b>
<b>12</b>	<b>C</b>	<b>1</b>
<b>13</b>	<b>C</b>	<b>1</b>
<b>14</b>	<b>C</b>	<b>1</b>
<b>15</b>	<b>B</b>	<b>1</b>
<b>16</b>	<b>B</b>	<b>1</b>
<b>17</b>	<b>D</b>	<b>1</b>
<b>18</b>	<b>D</b>	<b>1</b>
<b>19</b>	<b>C</b>	<b>1</b>
<b>20</b>	<b>B</b>	<b>1</b>
<b>21</b>	<b>Part A: B Part B: A</b>	<b>2</b>
<b>22</b>	<b>A, B, C</b>	<b>2</b>
<b>23</b>	<b>B, C, D</b>	<b>2</b>



**basic education**

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

# **ANNUAL NATIONAL ASSESSMENT**

## **GRADE 3**

## **MATHEMATICS**

## **SET 1: 2012 EXAMPLAR**



## GUIDELINES FOR THE USE OF ANA EXEMPLARS

### 1. General overview

The Annual National Assessment (ANA) is a summative assessment of the knowledge and skills that learners are expected to have developed by the end of each of the Grades 1 to 6 and 9. To support their school-based assessments and also ensure that learners gain the necessary confidence to participate with success in external assessments, panels of educators and subject specialists developed exemplar test questions that teachers can use in their Language and Mathematics lessons. The exemplar test questions were developed based on the curriculum that covers terms 1, 2 and 3 of the school year and a complete ANA model test for each grade has been provided. The exemplars, which include the ANA model test, supplement the school-based assessment that learners must undergo on a continuous basis and does not replace the school based assessment.

### 2. The structure of the exemplar questions

The exemplars are designed to illustrate different techniques or styles of assessing the same skills and/or knowledge. For instance, specific content knowledge or a skill can be assessed through a multiple-choice question (where learners select the best answer from the given options) or a statement (that requires learners to write a short answer or a paragraph) or other types of questions (asking learners to join given words/statements with lines, to complete given sentences or patterns, to show their answers with drawings or sketches, etc.). Therefore, teachers will find a number of exemplar questions that are structured differently but are targeting the same specific content and skill. Exposure to a wide variety of questioning techniques or styles gives learners the necessary confidence to respond to different test items.

### 3. Links with other learning and teaching resource materials

For the necessary integration, some of the exemplar texts and questions have been deliberately linked to the grade-relevant workbooks. The exemplars have also been aligned with the requirements of the National Curriculum Statement (NCS), Grades R to 12, the Curriculum and Assessment Policy Statements (CAPS) for the relevant grades and the National Protocol for Assessment. These documents, together with any other that a school may provide, will constitute a rich resource base to help teachers in planning lessons and conducting formal assessment.

### 4. How to use the exemplars

While the exemplars for a grade and a subject have been compiled into one comprehensive set, the learner does not have to respond to the whole set in one sitting. The teacher should select exemplar questions that are relevant to the planned lesson at any given time. Carefully selected individual exemplar test questions, or a manageable group of questions, can be used at different stages of the teaching and learning process as follows:

- 4.1 At the beginning of a lesson as a diagnostic test to identify learner strengths and weaknesses. The **diagnosis** must lead to prompt **feedback** to learners and the development of **appropriate lessons** that address the identified weaknesses and consolidate the strengths. The diagnostic test could be given as homework to save instructional time in class.
- 4.2 During the lesson as short formative tests to assess whether learners are developing the intended knowledge and skills as the lesson progresses and ensure that no learner is left behind.
- 4.3 At the completion of a lesson or series of lessons as a summative test to assess if the learners have gained adequate understanding and can apply the knowledge and skills acquired in the completed

lesson(s). Feedback to learners must be given promptly while the teacher decides on whether there are areas of the lesson(s) that need to be revisited to consolidate particular knowledge and skills.

- 4.4 At all stages to expose learners to different techniques of assessing or questioning, e.g. how to answer multiple-choice (MC) questions, open-ended (OE) or free-response (FR) questions, short-answer questions, etc.

While diagnostic and formative tests may be shorter in terms of the number of questions included, the summative test will include relatively more questions, depending on the work that has been covered at a particular point in time. It is important to ensure that learners eventually get sufficient practice in responding to full tests of the type of the ANA model test.

## **5. Memoranda or marking guidelines**

A typical example of the expected responses (marking guidelines) has been given for each exemplar test question and for the ANA model test. Teachers must bear in mind that the marking guidelines can in no way be exhaustive. They can only provide broad principles of expected responses and teachers must interrogate and reward acceptable options and variations of the acceptable response(s) given by learners.

## **6. Curriculum coverage**

It is extremely critical that the curriculum must be covered in full in every class. The exemplars for each grade and subject do not represent the entire curriculum. They merely **sample** important knowledge and skills and covers work relating to terms 1, 2 and 3 of the school year. The pacing of work to be covered according to the school terms is specified in the relevant CAPS documents.

## **7. Conclusion**

The goal of the Department is to improve the levels and quality of learner performance in the critical foundational skills of literacy and numeracy. ANA is one instrument the Department uses to monitor whether learner performance is improving. Districts and schools are expected to support teachers and provide necessary resources to improve the effectiveness of teaching and learning in the schools. By using the ANA exemplars as part of their teaching resources, teachers will help learners become familiar with different styles and techniques of assessing. With proper use, the exemplars should help learners acquire appropriate knowledge and develop relevant skills to learn effectively and perform better in subsequent ANA tests.

## NUMBERS, OPERATIONS AND RELATIONSHIPS

### Working with whole numbers

1. Look at the picture below.



- Estimate how many objects there are in the picture.
- Count the given objects.
- Group these objects in fours.
- Mark one half of the pegs with an "X".
- What is the **difference** between the estimated number and the actual number of objects?
- How many objects must I add or subtract to make the estimated number equal to the actual number?
- Underline the correct answer.

There are \_\_\_\_\_ objects in the picture.

42      25      44      100

2. Fill in the missing numbers.

a. 600, 500, \_\_\_\_, 300, \_\_\_\_, 100.

b. 4, 8, 12, \_\_\_\_, \_\_\_\_, 24, \_\_\_\_.

3. Complete the table.

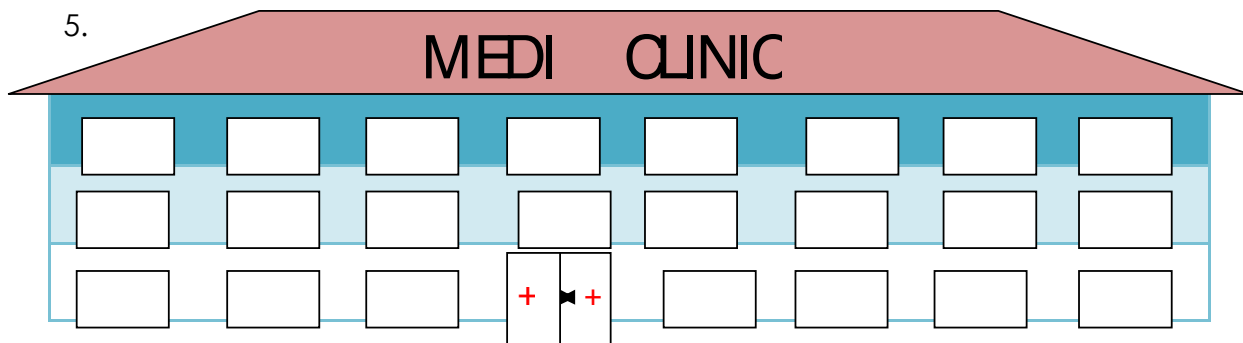
a.	Count on in 2s	128			
b.	Count backwards in 10s	170			
c.	Count in 3s			9	

4. Fill in the missing numbers in the spaces provided.

a. 173, 172, 171, \_\_\_\_, \_\_\_\_, 168, 167, \_\_\_\_.

b. 195, 190, \_\_\_\_, \_\_\_\_, 175, \_\_\_\_, 165.

5.



The hospital has **three** floors.

The rooms are numbered from **ninety-nine** to **one hundred and twenty-one** as shown in the table.

Floor 3		115		117		119	120	
Floor 2	106			109	110			113
Floor 1	99	100		Ent rance		103	104	

Number the doors of the un-numbered rooms.

Then fill in the room number in each sentence.

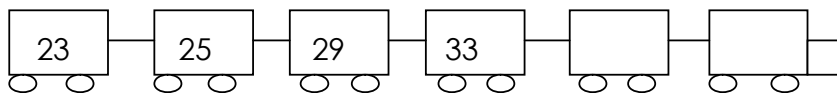
- The third last room on floor 2 is\_\_\_\_\_.
- The fifth room on floor 1 is\_\_\_\_\_.
- The last room on floor 3 is\_\_\_\_\_.

d. The room which comes before room 114 is room\_\_\_\_\_.

e. Just after room 105 is room\_\_\_\_\_.

f. Between room 99 and room 101 is room \_\_\_\_\_.

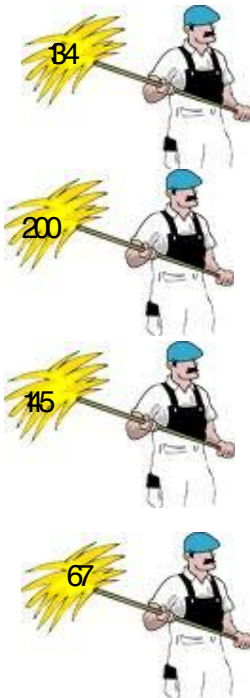
6. Fill in the missing numbers.



What rule did you use?

7. Write the number name for the number symbol.

8. Match the number name to the number symbol.



two hundred

sixty-seven

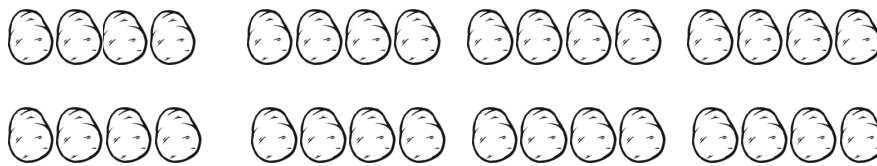
one hundred and thirty-four

one hundred and forty-five

9. Write the number symbol.
- One hundred and ninety-nine
  - Seventy-eight

10. Look at the picture.

Count the number of potatoes and write down the number name and number symbol.



- a. \_\_\_\_\_ b. \_\_\_\_\_

11. Write the name of the whole number that comes:
- before 88
  - after 88
  - between 88 and 90

12. Fill in  $>$ ,  $<$  or  $=$  to make the number sentence true.

$$24 + 10 \quad \underline{\hspace{1cm}} \quad 10 \times 10$$

13.  $101 > 122$

Is the above number sentence correct?

Tick the box with the correct answer

Yes

No

14. Write down **True** or **False**.

a.  $37 + 20 = 50 + 8$

b.  $190 > 119$

c.  $18 \div 2 < 9 \times 2$

15. Arrange the given numbers from the smallest to the greatest.

99 , 13 , 35 , 70 , 9

16. Five numbers have been arranged from the greatest to the smallest.

Circle the letter of the correct answer.

A 17 , 35 , 53 , 59 , 95

B 59 , 17 , 95 , 35 , 53

C 95 , 59 , 53 , 35 , 17

D 53 , 17 , 59 , 95 , 35

17. Write down **Yes** or **No**.

Are the following numbers arranged correctly from the smallest to the greatest?

24, 27, 30, 51, 64, 99

18. Write down the **place value** of the underlined digit.

a. 56

b. 74

19. What is the **value** of the underlined digit?

a. 63

b. 19



20. Break down the given numbers.

a. 61

b. 50

21. Circle the letter of the correct answer.

The place value of 3 in 93 is:

A. units

B. tens

C. hundreds

22. Mark the block with the correct answer with a "X".

The value of the digit 6 in number 61 is

60
----

6
---

23. Build up the following numbers.

$$100 + 80 + 9 = \underline{\hspace{2cm}}$$

$$100 + 100 + 0 + 0 = \underline{\hspace{2cm}}$$

$$100 + 40 + 30 + 2 + 1 = \underline{\hspace{2cm}}$$

24. Break down.

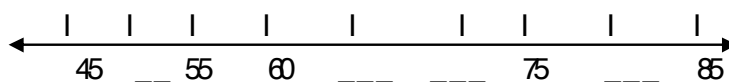
a.  $136 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

b.  $36 = \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$

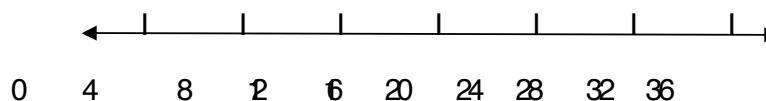
25. Fill in the missing numbers in the table below.

Number doubled	Number	Number halved
	42	
	37	
	34	

26. Fill in the missing numbers on the number line.



27. a. Show how you can use the number line to add 16 and 12.



b. **Double** your answer.

a. **Halve** your answer.

28. Circle the letter of the correct answer.

Half of 50 is:

A. 20      B. 15      C. 24      D. 25

29. There were 67 cans of cool drink in the fridge. Dad put in another 32 cans. How many cans are now in the fridge?
30. Bob collected 122 glass bottles for a recycling project. 38 of them broke. How many bottles did not break?
31. The Grade 1 learners collected 67 ice cream sticks. The Grade 2 learners collected 56 ice cream sticks and the Grade 3 learners collected 45. How many ice cream sticks did the Foundation Phase learners collect?
32. There are twenty baskets with five apples in each. How many apples are in the baskets altogether?
33. Busi had sixteen trays of eggs. Each tray holds twelve eggs. Sam brought another twelve trays for Busi. How many trays does Busi now have?
34. Sally bought ten packets of Jelly Tots. Each packet cost R3,00. How much did she pay for the Jelly Tots?
35. Donald has ninety lollipops and wants to share them equally amongst his three nephews. How many lollipops will each nephew get?
36. Mum baked twenty-four cupcakes and shared them equally amongst her four children. How many cupcakes did each child get?

37. **MONEY**

- a. Write down the colour of each of the South African banknotes.



b. How many of the following coins are R2,00 coins?



Complete:

$$5c + 20c + 50c + 10c = \underline{\hspace{2cm}}$$

- Vusi wants to buy a pair of roller skates which cost R90. She has saved R45 thus far. How much more does she need to save?
- Lefia wants to buy two balls which cost R34 each. How much money does she need to buy the balls?
- Lebo's mum gave her a 50c coin and her dad gave four 20c coins to spend. How much change will she get if she buys a packet of sweets which cost 95c?

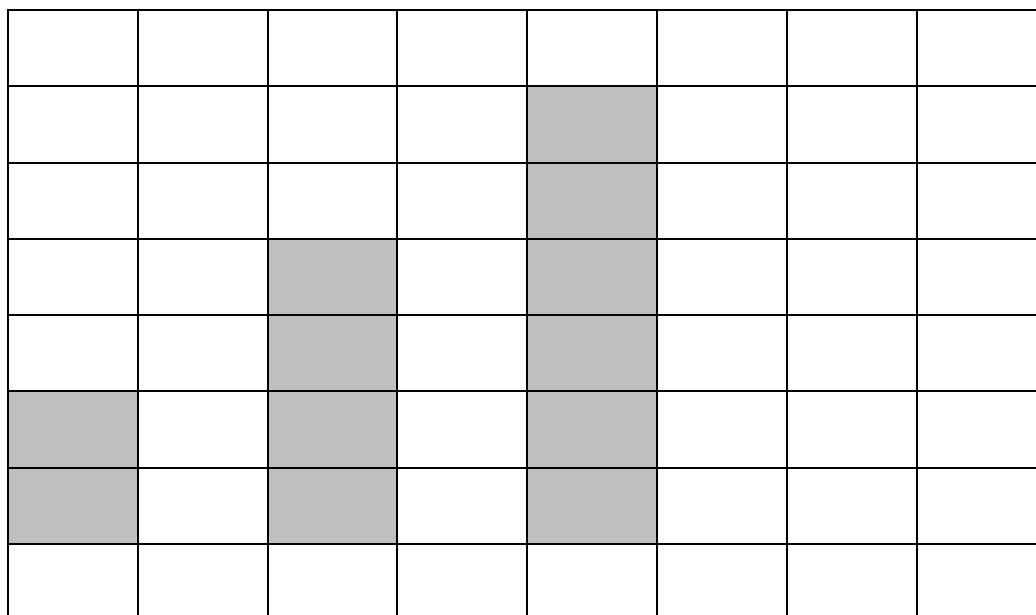
## PATTERNS, FUNCTIONS AND ALGEBRA

1. Colour in the last diagram to complete the pattern.



Describe the pattern in your own words.

2. Draw the next diagram in the “growing” diagram pattern.



3. Make your own pattern using shapes.

4. Fill in the missing numbers

60; 70; 80; \_\_\_\_; \_\_\_\_; \_\_\_\_.

5. Susan's mum baked 10 pizzas and cut each into the same number of slices.

Complete the table.

Number of pizzas	1	2	3	4	10
Number of slices	5		15		

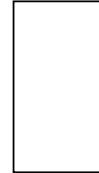
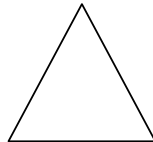
6. Write down the next four numbers in each sequence.

a. 412; 410; 408; \_\_\_\_; \_\_\_\_; \_\_\_\_; \_\_\_\_

b. 123; 126; 129; \_\_\_\_; \_\_\_\_; \_\_\_\_; \_\_\_\_.

## SPACE AND SHAPE

1. How many sides does each shape have?



2. Match each word to the correct shape.

square

rectangle

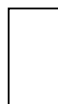
circle

triangle



3. Write down the name of each of the given shapes.

a.



b.



c.



d.



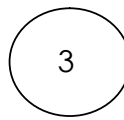
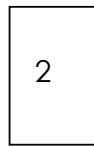
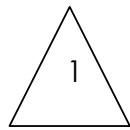


4. Draw the shape under the word.

a. Triangle

b. Rectangle

5. Use the numbers written in the shapes to make the sentences that follow true.



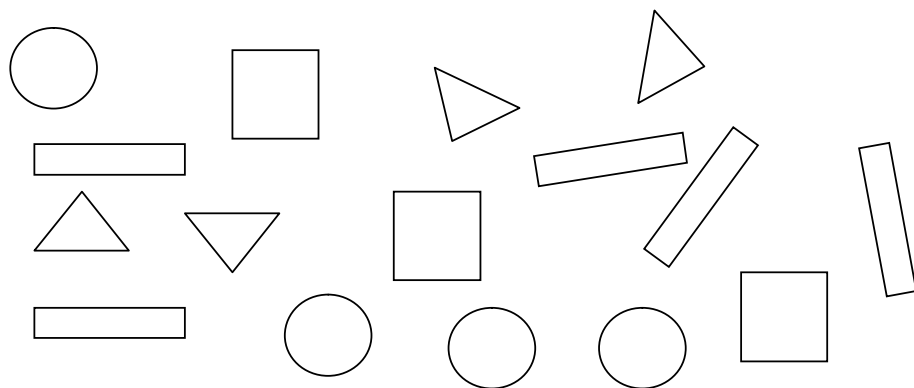
a. The circle is marked with number \_\_\_\_\_.

b. The rectangle is marked with number \_\_\_\_\_.

c. The square is marked with number \_\_\_\_\_.

d. The triangle is marked with number \_\_\_\_\_.

6.



Colour in

- A    t h e t r i a n g l e s i n g r e e n .
- B    t h e s q u a r e s i n r e d .
- C    t h e r e c t a n g l e s i n b l u e .
- D    t h e c i r c l e s i n y e l l o w .

## **MEASUREMENT**

1.    S t u d y t h e F e b r u a r y 2 0 1 2 c a l e n d a r a n d c o m p l e t e t h e s e n t e n c e s t h a t f o l l o w .

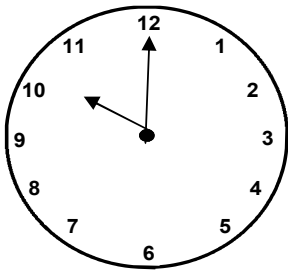
Febr uar y

Sun	Mon	Tues	Wed	Thur s	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

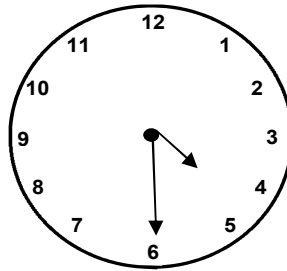
- a.    Febr uar y 2 0 1 2 h a s \_\_\_\_\_ d a y s .
- b.    T h e m o n t h o f F e b r u a r y 2 0 1 2 s t a r t s o n a \_\_\_\_\_ .
- c.    T h e f i r s t w e e k h a s \_\_\_\_\_ d a y s .
- d.    Febr uar y 2 0 1 2 e n d s o n a \_\_\_\_\_ .
- e.    I n F e b r u a r y 2 0 1 2 t h e r e a r e \_\_\_\_\_ S u n d a y s .
- f .    T h e r e a r e \_\_\_\_\_ f u l l w e e k s i n F e b r u a r y 2 0 1 2

- g. On the 7<sup>th</sup> of February the Moloi family left for a holiday. They returned on the 23<sup>rd</sup> of February. The Moloi family's holiday lasted \_\_\_\_\_ days.
- h. The Grade 3 learners went on a 16 day tour to the Kruger National Park. They left on the 13<sup>th</sup> of February 2012. They returned on the \_\_\_\_\_.

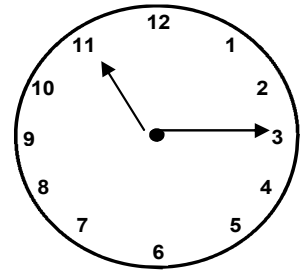
2. Write down the correct time shown on each of the clock faces.



a \_\_\_\_\_

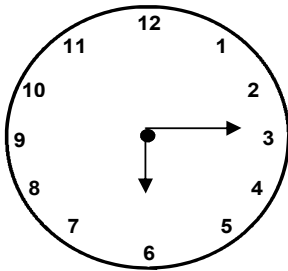


b \_\_\_\_\_



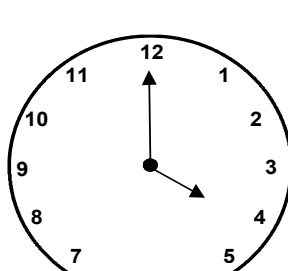
c \_\_\_\_\_

3. Write down the correct time shown on each of the clock faces in digital and analogue time.



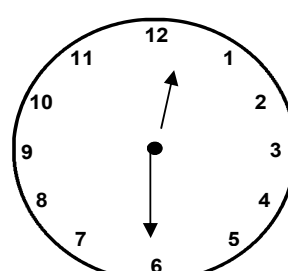
a. \_\_\_\_\_

\_\_\_\_\_



b. \_\_\_\_\_

\_\_\_\_\_

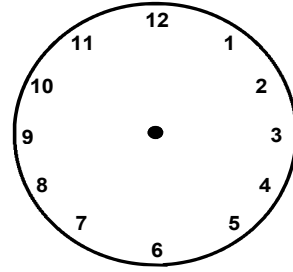
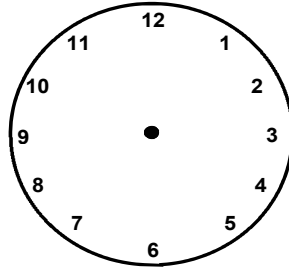
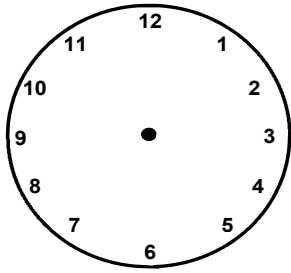


c. \_\_\_\_\_

\_\_\_\_\_

4. Draw the hands on each of the following clock faces to show the

required time.

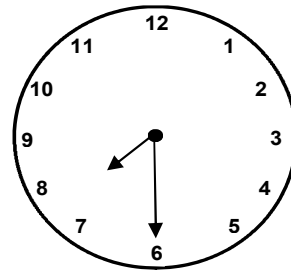
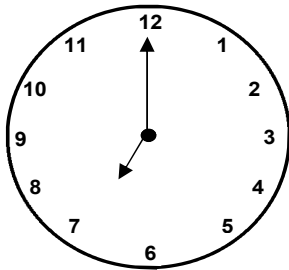


half past 9

11 o'clock

a quarter past 7

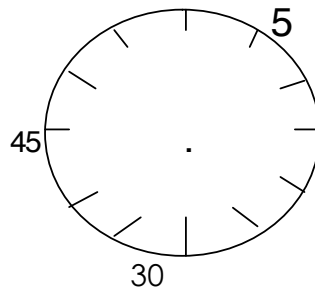
5. Liza walks to school.



She leaves home at 07:00 She gets to school at 07:30

It took Liza \_\_\_\_\_ minutes to walk to school.

6. Number the missing minute intervals on the given clock faces.



7. Complete:

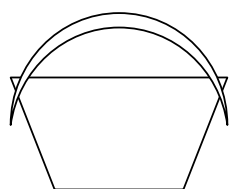
If one bottle of cool drink fills four glasses then

- a. 2 bottles fill \_\_\_\_\_ glasses.
- b. 5 bottles fill \_\_\_\_\_ glasses.
- c. \_\_\_\_\_ bottles fill 40 glasses.
- d. \_\_\_\_\_ bottles fill 12 glasses.

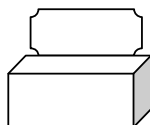
8. Write down the capacities of the following containers from the smallest to the largest.

500ml tin of juice      5ml teaspoon      250ml cup  
5l bucket              2l bottle of coke

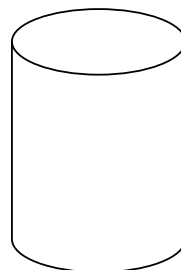
9. Look at the pictures below and answer the questions that follow.



5l



1l



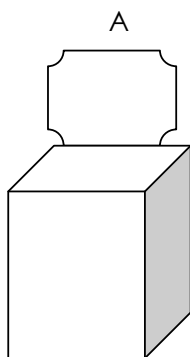
10l



2l

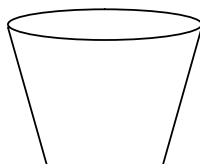
- a. How many 2l bottles are needed to fill the 10l bin?
- b. How many 1l containers can I fill from the 2l containers?

10.



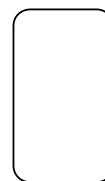
2l

B



1l

C



500ml

Study the above pictures and say whether you agree with the sentences by writing **YES** or **NO**.

- a. The capacity of A is double that of B.
- b. The capacity of B is double that of A.
- c. The capacity of C is double that of A.
- d. The capacity of B is double that of C.

## **DATA HANDLING**

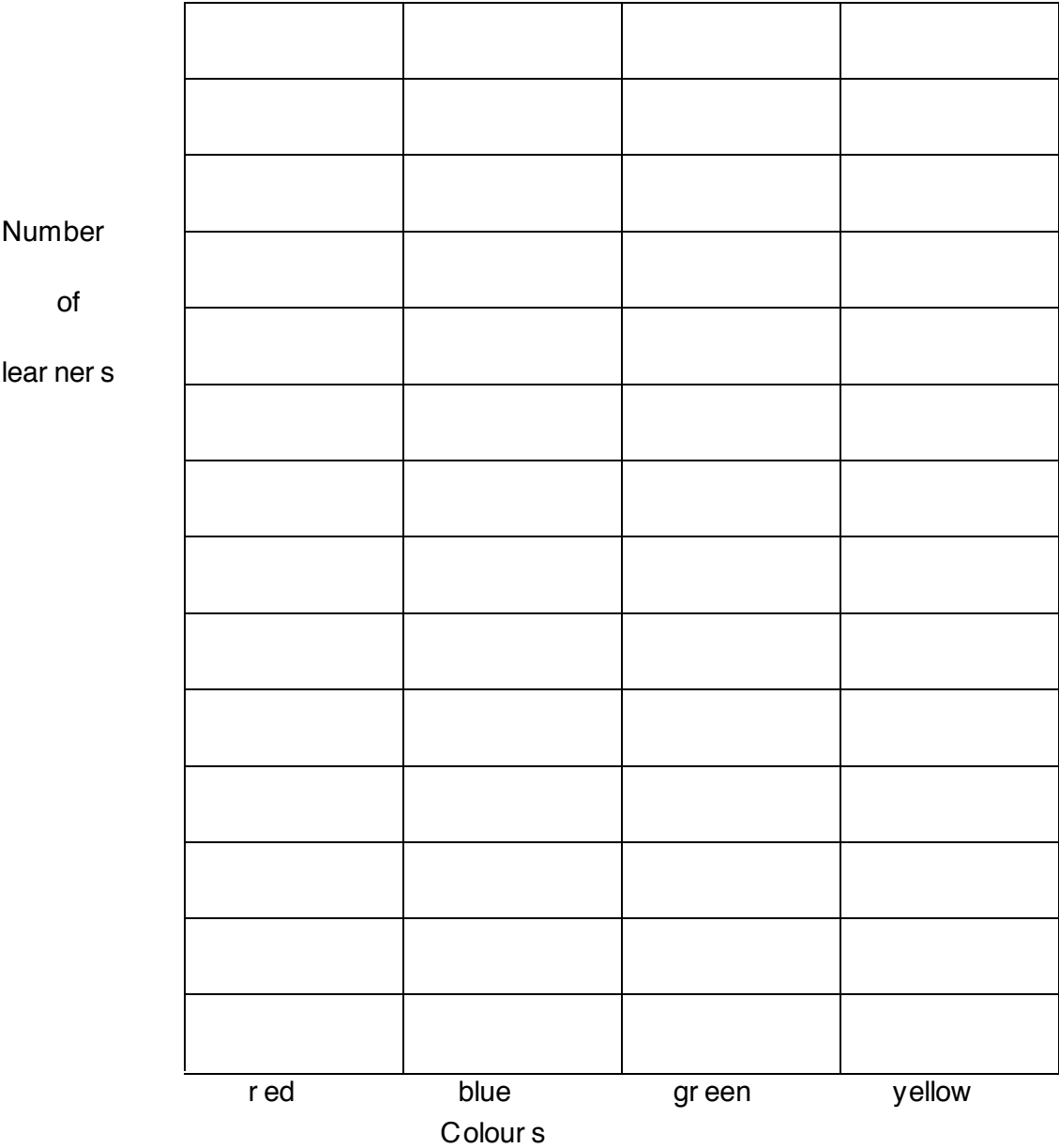
1. The Grade 3 learners were asked to select their favourite colours.

The results are listed below.

<b>Colour</b>	<b>Number of learners</b>
red	16
blue	20
green	12
yellow	10

Use the information in the table to complete the bar graph. Then complete the sentences that follow.

Learners favourite colours

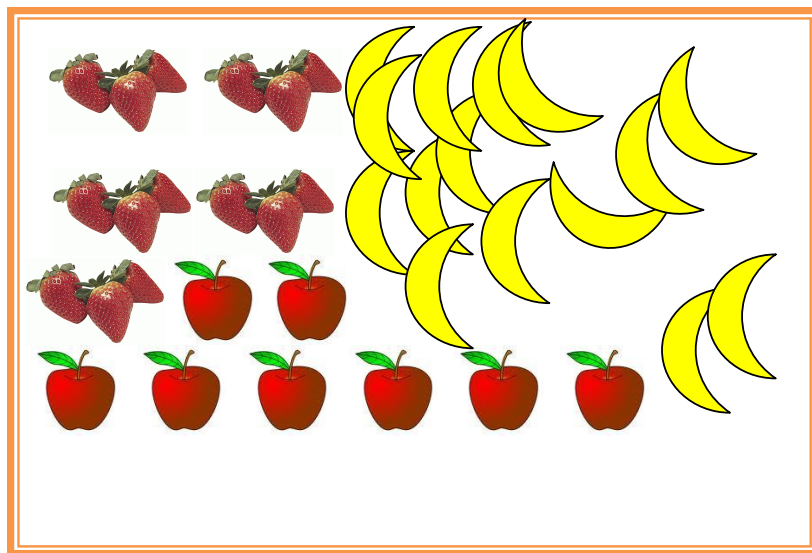




- a. \_\_\_\_\_ learner s wer e q ues t ioned about t heir f avour it e colour s.
- b. The most popular colour is\_\_\_\_\_.
- c. The least popular colour is\_\_\_\_\_.
- d. \_\_\_\_\_ mor e lear ner s pr ef er red red t o yellow .
- e. The t ot al number of lear ner s who chose gr een and yellow colour s ar e\_\_\_\_\_.

2. Our local fruit store donated a box of fruit to the Tshabalala family.

The box contained a variety of fruit as shown in the picture below.



Complete the frequency table.

Kind of fruit	Tally marks	Frequency
Apple		
Banana		
Strawberry		



# basic education

Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA

MARKS

## ANNUAL NATIONAL ASSESSMENT 2014 GRADE 3 MATHEMATICS: ENGLISH TEST

MARKS: 40

TIME: 1 HOUR

PROVINCE \_\_\_\_\_

DISTRICT \_\_\_\_\_

CIRCUIT \_\_\_\_\_

SCHOOL NAME \_\_\_\_\_

EMIS NUMBER (9 digits)

--	--	--	--	--	--	--	--	--

CLASS (e.g. 3A) \_\_\_\_\_

SURNAME \_\_\_\_\_

NAME \_\_\_\_\_

GENDER (✓)

BOY

GIRL

DATE OF BIRTH

C	C	Y	Y	M	M	D	D
---	---	---	---	---	---	---	---

This test consists of 13 pages excluding the cover page.

### Instructions to learners:

1. Answer all the questions in the spaces or frames provided.
2. All working must be shown on the question paper.
3. You may not use a calculator.
4. The test is out of 40 marks.
5. The test duration is 60 minutes.
6. The teacher will take you through the practice exercise.

### Practice exercise

Calculate:  $125 + 64$

Answer: by using mental mathematics.

$$125 + 64 = 189$$

or

Answer: by using the 'breaking down' method.

$$125 + 64$$

$$= 100 + 20 + 5 + 60 + 4$$

$$= 100 + 20 + 60 + 5 + 4$$

$$= 100 + 80 + 9$$

$$= 189$$

or

Answer: by using the 'adding-on' method.

$$125 + 64 \longrightarrow 125 + 60 + 4 \longrightarrow 185 + 4 \longrightarrow 189$$

You may not use the 'vertical column' method.

**The test starts on the next page.**

1. Arrange 432, 324, 243, 342 from the smallest to the greatest.

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2. Count backwards in 100s from 521 to 121.

521; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_; 121

Circle the letter of the correct answer from question 3-6.

3. 37 doubled =

A 78

B 67

C 74

D 66

4. 3.15 a.m. on an analogue clock shows that the time is ...

A quarter past three in the morning.

B quarter past three in the evening.

C quarter to three in the morning.

D quarter to three in the evening.

5. Round off 132 to the nearest 10.

A 140

B 135

C 130

D 100

6. Break down the number 254 into hundreds, tens and units.

A  $200 + 50 + 4$

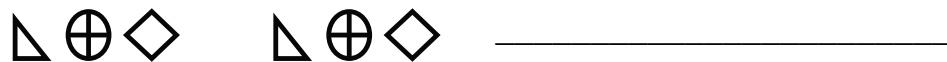
B  $200 + 5 + 4$

C  $200 + 5 + 40$

D  $200 + 50 + 40$

7. Complete 7.1 and 7.2.

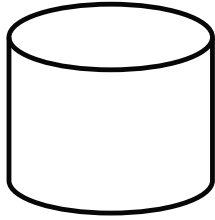
7.1 Repeat the pattern once.



7.2 Count forwards in 20s.

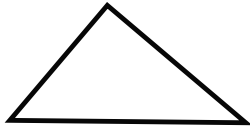
220; 240; \_\_\_\_\_; \_\_\_\_\_; \_\_\_\_\_

8. Write down the name of the given object below.



\_\_\_\_\_

9. Write down the name of the given shape below.



\_\_\_\_\_

10. Draw only one line of symmetry on the following shape.



11. Write down the number symbol for three hundred and thirty-six.

\_\_\_\_\_

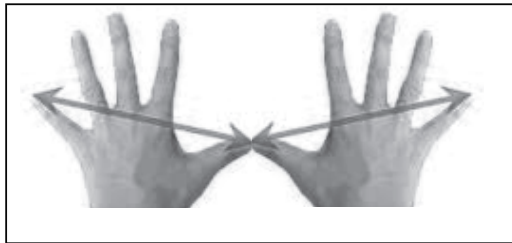
12. Write down the number name for 165.

\_\_\_\_\_

13. Write down the value of the underlined digit in the number:

472 \_\_\_\_\_

14. The hand span of each hand is 10 cm.



Together the hand spans are \_\_\_\_\_cm.



Complete the following sentences in 15 and 16.



15. The mass of the above washing powder is measured in \_\_\_\_\_.



16. The capacity of the above bottle is measured in \_\_\_\_\_.

17. Answer questions 17.1 and 17.2.

17.1 Nelson eats 2 pieces of the chocolate shown below.



What fraction of the chocolate did Nelson eat? \_\_\_\_\_

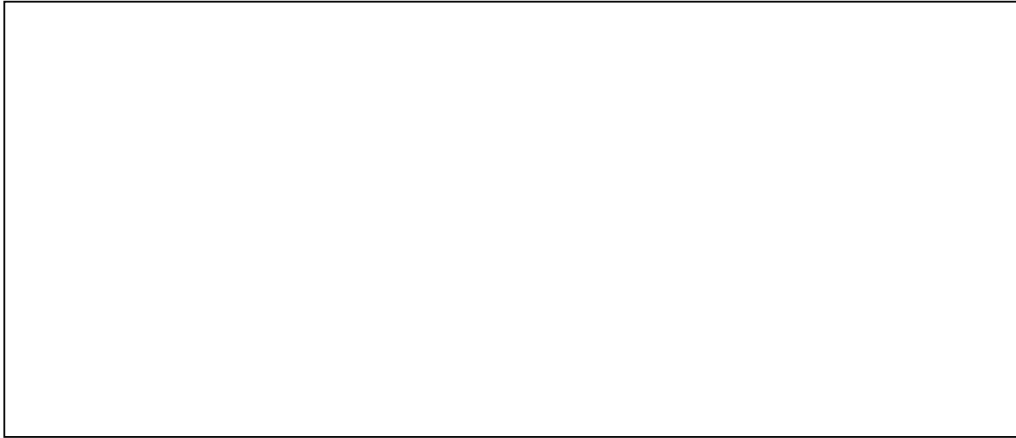
17.2 Zinzi eats a quarter of the chocolate shown below.



How many pieces did Zinzi eat? \_\_\_\_\_

18. Calculate the answer in questions 18.1 and 18.2.

18.1 In the toy box there are 12 soccer balls, 12 rugby balls and 12 tennis balls. How many balls are there altogether?



18.2  $5 \times 10 =$  \_\_\_\_\_

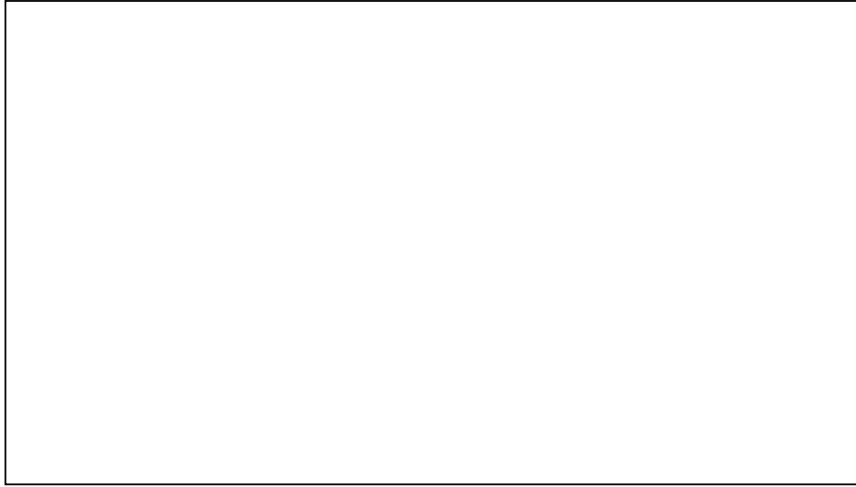
19. Mum shared 42 sweets equally amongst her 3 children.

How many sweets did each child get?

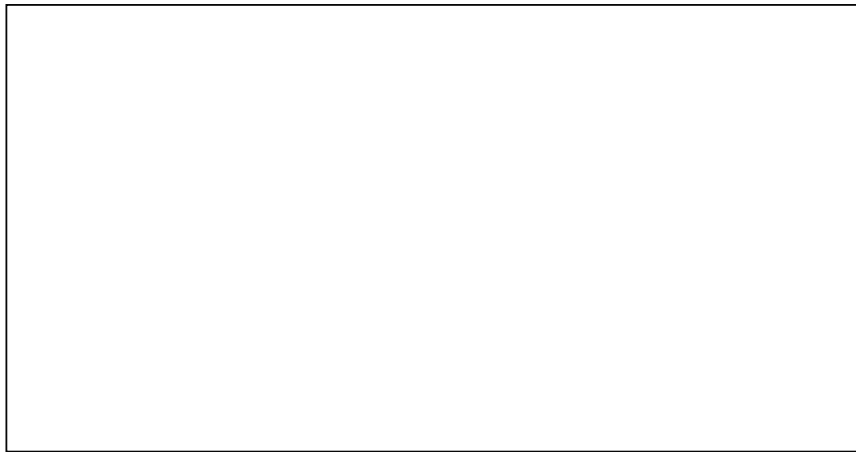




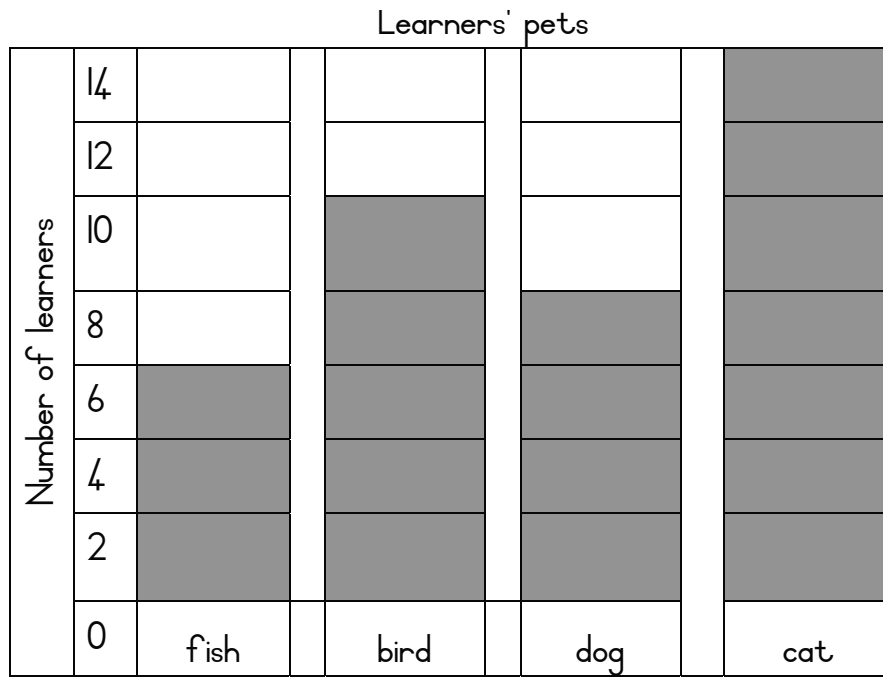
21. Calculate  $245 + 153$  by using the 'adding-on' method.



22. Calculate  $489 - 256$  by using the 'breaking down' method.






23. Study the bar graph and answer the questions that follow.



23.1 Which is the most popular pet? \_\_\_\_\_

23.2 How many learners like dogs? \_\_\_\_\_

24. Read the price list below and answer the questions that follow.

 R25,00	 R13,50	 R18,25
Drum	Guitar	Trumpet

24.1 Which two musical instruments can you buy for exactly R38,50?

\_\_\_\_\_

24.2 Jack buys a trumpet and pays with a R50 note. How much change will he get?

--

He will get R \_\_\_\_\_, \_\_\_\_\_

25. Convert:

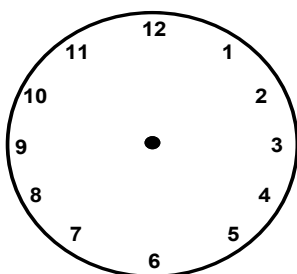
25.1  $R3,50 = \underline{\hspace{2cm}}c$

25.2  $200c = R\underline{\hspace{1cm}}, \underline{\hspace{1cm}}$

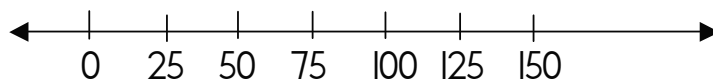
26. Calculate  $42 \div 2$ .



27. Draw the hands on the analogue clock to show that the time is 05:15.



28. Draw jumps on the number line to show that  $25 + 25 = 50$ .



TOTAL: 40





The purpose of these practice test materials is to orient teachers and students to the types of questions on paper-based FSA tests. By using these materials, students will become familiar with the types of items and response formats they may see on a paper-based test. The practice questions and answers are not intended to demonstrate the length of the actual test, nor should student responses be used as an indicator of student performance on the actual test. The practice test is not intended to guide classroom instruction.

### **Directions for Answering the Mathematics Practice Test Questions**

If you don't know how to work a problem, ask your teacher to explain it to you. Your teacher has the answers to the practice test questions.

You may need formulas and conversions to help you solve some of the problems. You may refer to the Reference Sheet on page 5 as often as you like.

Use the space in your Mathematics Practice Test Questions booklet to do your work.

## Directions for Completing the Response Grids

1. Work the problem and find an answer.
2. Write your answer in the answer boxes at the top of the grid.
  - Write your answer with the first digit in the left answer box OR with the last digit in the right answer box.
  - Write only one digit or symbol in each answer box. Do NOT leave a blank answer box in the middle of an answer.
  - Be sure to write a decimal point or fraction bar in the answer box if it is a part of the answer.
3. Fill in a bubble under each box in which you wrote your answer.
  - Fill in one and ONLY one bubble for each answer box. Do NOT fill in a bubble under an unused answer box.
  - Fill in each bubble by making a solid mark that completely fills the circle.
  - You MUST fill in the bubbles accurately to receive credit for your answer.

	/	/	/	/	/	/	
.	.	.	.	.	.	.	.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

} Answer boxes

} Fraction bar

} Decimal point

} Number bubbles

When a percent is required to answer a question, do NOT convert the percent to its decimal or fractional equivalent. Grid in the percent value without the % symbol. Do the same with dollar amounts.

2	5	.	3								1	3	6
/	/	/	/	/	/	/	/	/	/	/	/	/	/
•	•	•	•	•	•	•	•	•	•	•	•	•	•
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9	9	9

Do NOT write a mixed number, such as  $13\frac{1}{4}$ , in the answer boxes.

Change the mixed number to an equivalent fraction, such as  $\frac{53}{4}$ , or to an

equivalent decimal, such as 13.25. Do not try to fill in  $13\frac{1}{4}$ , as it would be

read as  $\frac{131}{4}$  and would be counted wrong.

**CORRECT**

**INCORRECT**

5	3	/	4			
/	/	/	/	/	/	/
•	•	•	•	•	•	•
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

OR

1	3	.	2	5		
/	/	/	/	/	/	/
•	•	•	•	•	•	•
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

1	3	1	/	4		
/	/	/	/	/	/	/
•	•	•	•	•	•	•
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

## **Grade 5 FSA Mathematics Reference Sheet**

### **Customary Conversions**

1 foot = 12 inches  
1 yard = 3 feet  
1 mile = 5,280 feet  
1 mile = 1,760 yards

1 cup = 8 fluid ounces  
1 pint = 2 cups  
1 quart = 2 pints  
1 gallon = 4 quarts

1 pound = 16 ounces  
1 ton = 2,000 pounds

### **Metric Conversions**

1 meter = 100 centimeters  
1 meter = 1000 millimeters  
1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams  
1 kilogram = 1000 grams

### **Time Conversions**

1 minute = 60 seconds  
1 hour = 60 minutes  
1 day = 24 hours  
1 year = 365 days  
1 year = 52 weeks

**BLANK PAGE**



# **Session 1**



**Use the space in this booklet to do your work. For multiple-choice items, fill in one bubble for the correct answer. For matching items and multiselect items, fill in the bubbles for all of the correct answers. For items with response grids, refer to the Directions for Completing the Response Grids on pages 3 and 4. If you change your answer, be sure to erase completely. Calculators are NOT permitted for Session 1 of this practice test.**

- 1.** The product of the following expression is 34,572.

$$\begin{array}{r} 402 \\ \times \quad \square 6 \\ \hline \end{array}$$

What is the missing digit?

- Ⓐ 0
- Ⓑ 1
- Ⓒ 7
- Ⓓ 8

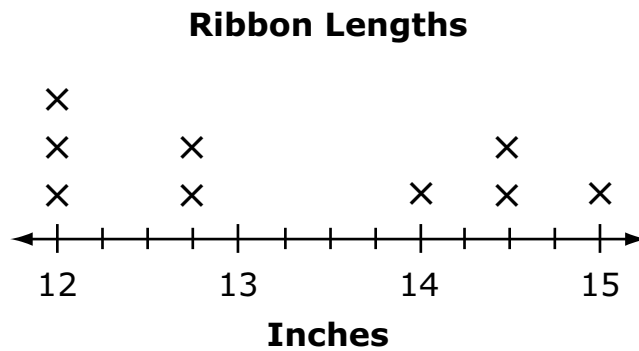
2. Allen ran 5.4 miles on Monday and 3.28 miles on Tuesday.

How many miles did Allen run altogether?

	/	/	/	/	/	/	
.	.	.	.	.	.	.	.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9



3. Kelly has nine pieces of ribbon. She recorded the length of each piece in the line plot shown.



What is the total length of the three longest pieces of ribbon?

- Ⓐ 43 inches
- Ⓑ  $43\frac{1}{2}$  inches
- Ⓒ 44 inches
- Ⓓ  $44\frac{1}{4}$  inches

4. What is the value of the expression  $6 \times (4 + 3)$ ?

	/	/	/	/	/	
.	.	.	.	.	.	.
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

5. Select all the numbers that Logan could multiply by 54,216 to get a product less than 54,216.

(A)  $\frac{7}{12}$

(B)  $\frac{4}{4}$

(C)  $1\frac{1}{5}$

(D)  $\frac{2}{9}$

(E) 3

(F)  $\frac{8}{5}$

6. Select the value of each decimal number when it is rounded to the nearest whole number.

	5	6
5.06	(A)	(B)
5.53	(C)	(D)
5.92	(E)	(F)
5.47	(G)	(H)

7. Jasmine has  $\frac{3}{4}$  cup of flour in a mixing bowl.

After adding more flour to the mixing bowl, Jasmine says that she now has  $\frac{5}{8}$  cup of flour.

Which of the following explains why Jasmine's statement is incorrect?

- Ⓐ 5 is not a multiple of 3.
- Ⓑ 3 is less than 5.
- Ⓒ  $\frac{5}{8}$  is less than  $\frac{3}{4}$ .
- Ⓓ  $\frac{5}{8}$  is not a multiple of  $\frac{3}{4}$ .

**This is the end of Session 1.**



## **Session 2**



Use the space in this booklet to do your work. For multiple-choice items, fill in one bubble for the correct answer. For matching items and multiselect items, fill in the bubbles for all of the correct answers. For items with response grids, refer to the Directions for Completing the Response Grids on pages 3 and 4. If you change your answer, be sure to erase completely. Calculators are NOT permitted for Session 2 of this practice test.

8. Which expression could be used to find the quotient of  $1,575 \div 21$ ?

- Ⓐ  $(1,000 \div 21) + (500 \div 21) + (70 \div 21) + (5 \div 21)$
- Ⓑ  $(1,500 \div 20) + (75 \div 1)$
- Ⓒ  $(1,575 \div 21) + (575 \div 21) + (75 \div 21) + (5 \div 21)$
- Ⓓ  $(1,575 \div 20) + (1,575 \div 1)$

9. David multiplies and divides original numbers by powers of 10 to create new numbers.

Original Number	New Number
523	523,000
0.005	5
100	0.001
600	60,000
4.56	4,560
37.9	3,790

Which original numbers were multiplied by  $10^3$  to create the new numbers?

- Ⓐ 523
- Ⓑ 0.005
- Ⓒ 100
- Ⓓ 600
- Ⓔ 4.56
- Ⓕ 37.9



**10.** What is the missing value in the equation?

$$2\frac{3}{12} + \frac{3}{\square} = 2\frac{5}{8}$$

	/	/	/	/	/	/	
.	.	.	.	.	.	.	.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

- 11.** Michael is measuring fabric for the costumes of a school play. He needs 47 feet of fabric. He has  $12\frac{1}{3}$  yards of fabric.

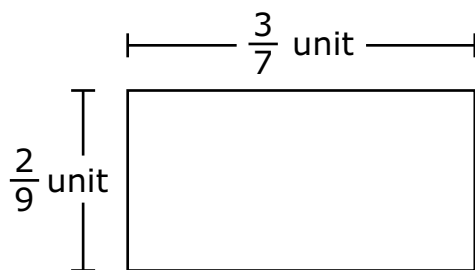
How many more **yards** of fabric does he need?

	/	/	/	/	/	/	
.	.	.	.	.	.	.	.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

**12.** Which statements about the values 0.034 and 3.40 are true?

- Ⓐ 0.034 is  $\frac{1}{10}$  of 3.40.
- Ⓑ 0.034 is  $\frac{1}{100}$  of 3.40.
- Ⓒ 0.034 is 10 times less than 3.40.
- Ⓓ 0.034 is 100 times more than 3.40.
- Ⓔ 3.40 is 100 times more than 0.034.

13. What is the area, in square units, of the rectangle?

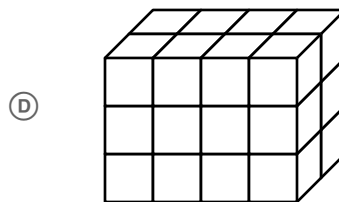
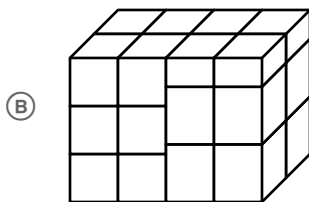
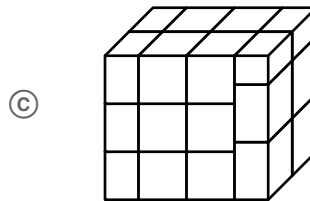
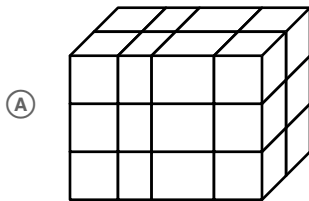


	/	/	/	/	/	/	
.	.	.	.	.	.	.	.
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

**14.** Select all the statements that correctly compare the two numbers.

- Ⓐ  $1.309 > 1.315$
- Ⓑ  $5.029 > 5.128$
- Ⓒ  $7.25 > 7.255$
- Ⓓ  $2.001 < 2.10$
- Ⓔ  $9.401 > 9.309$

**15.** For which solid object can the volume be found only by counting the number of cubes?



**This is the end of Session 2.**

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