



**NEW ENGLAND  
COMMON ASSESSMENT PROGRAM**

**Released Items  
2012**

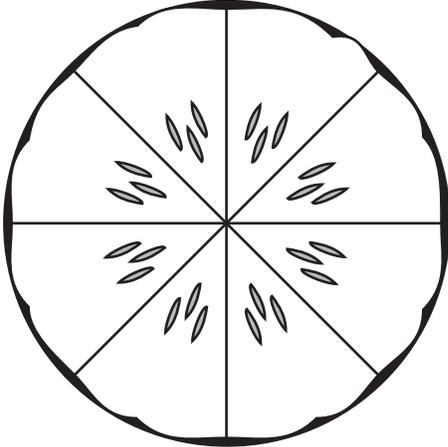
**Grade 4  
Mathematics**

# Mathematics



Items with this symbol were selected from Session One—no calculators or other mathematics tools allowed.

- 1 Look at this pie.



Juan took  $\frac{2}{8}$  of the pie. Susie took  $\frac{1}{8}$ .  
Lori took  $\frac{1}{8}$ . How much of the pie was left over?

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



- 2 What number has exactly 12 ones, 5 hundreds, and 20 tens?

- A. 712
- B. 802
- C. 12,520
- D. 52,012



- 3 This table shows the number of library books at some schools.

School	Number of Library Books
King Elementary	480
Central Elementary	528
Johnson Elementary	465
Lincoln Elementary	551

Which school has the number of books **closest** to 500?

- A. King Elementary
- B. Central Elementary
- C. Johnson Elementary
- D. Lincoln Elementary



- 4 Molly solved this problem.

$$\begin{array}{r} 275 \\ -119 \\ \hline 156 \end{array}$$

Which number sentence could Molly use to check her work?

- A.  $156 + 119 = \square$
- B.  $156 - 119 = \square$
- C.  $275 + 119 = \square$
- D.  $275 + 156 = \square$

- 5 Sandy is solving this problem.

$$5 \times 6 = \square$$

How could Sandy use counters to solve this problem?

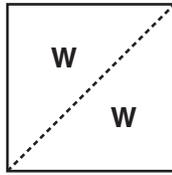
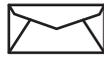
- A. Make 11 groups with 1 counter in each group.
- B. Make 30 groups with 5 counters in each group.
- C. Make 5 groups with 6 counters in each group.
- D. Make 6 groups with 30 counters in each group.



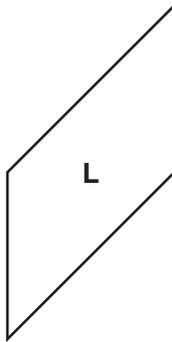
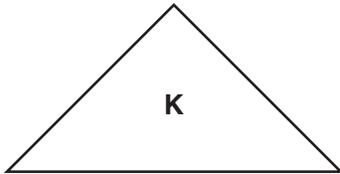
- 6 Amy bought 3 packages of buttons. Each package had 8 buttons. She used 19 buttons to make puppets. How many buttons does Amy have left?

- A. 5
- B. 8
- C. 15
- D. 43

- 7 Kim cut this square into two triangles as shown below.



She tried to make these shapes with the two triangles.



Which shapes can Kim make?

- A. K and L only
- B. L and M only
- C. K and M only
- D. K, L, and M

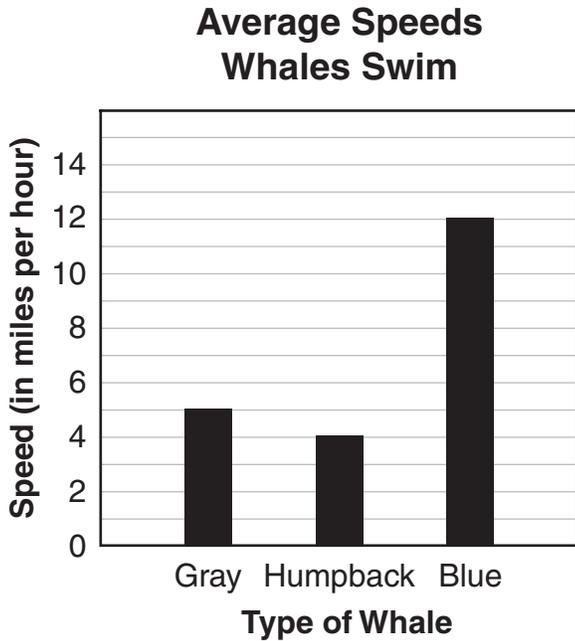
- 8 Look at this number sentence.

$$4 \times 4 \times \boxed{?} = 8 \times 2$$

What number makes this number sentence true?

- A. 0
- B. 1
- C. 2
- D. 16

- 9 This bar graph shows the average speeds three different types of whales can swim.



How much faster does a blue whale swim than a gray whale swims?

- A. 5 miles per hour
- B. 6 miles per hour
- C. 7 miles per hour
- D. 8 miles per hour

- 10 Ms. Lang asked the students in her class, “What color is your backpack?” This tally chart shows the students’ answers.

**Backpack Colors**

Color	Number of Students
Blue	
Purple	
Red	
Green	
Pink	
Black	

Ms. Lang wants to use the information in the tally chart to make a bar graph. How many bars will be on the bar graph?

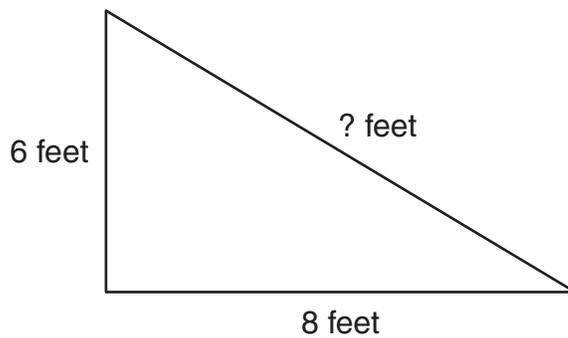
- A. 2
- B. 6
- C. 7
- D. 18

11 Look at this number sentence.

$$6 + 6 + 6 = \square$$

Write a multiplication sentence that means the same as this number sentence.

12 Look at this triangle.



The perimeter of the triangle is 24 feet. What is the length of the third side?

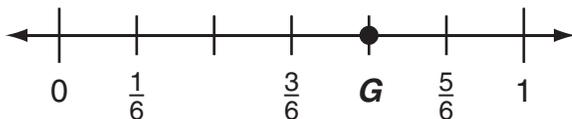
\_\_\_\_\_ feet

- 13 Look at this number sentence.

$$\triangle = 10 - \triangle$$

Each triangle has the same value. What is the value of each triangle?

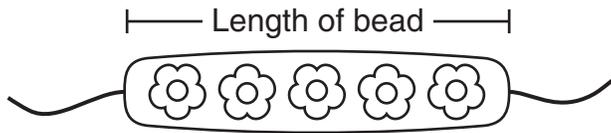
- 14 Look at this number line.



- a. What fraction does point  $G$  represent on the number line?
- b. Write a different fraction that is equivalent to the fraction you wrote in part (a).

15 Use your ruler to answer this question.

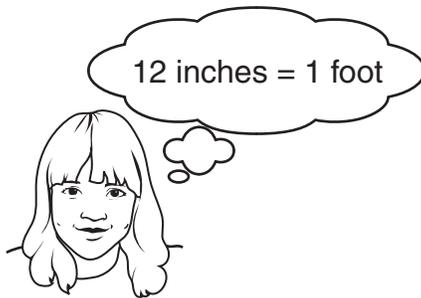
Monique has a set of beads. Each of her beads is the same length as this bead.



a. What is the length of this bead to the nearest inch?

\_\_\_\_\_ inches

Monique wants to put 1 foot 6 inches of her beads on a string.



b. What is the total number of beads Monique needs?

16 Ms. Corrigan gave notebooks to nine students. Each notebook was either red, blue, or green.

- Red was the most common color.
- Green was less common than blue.

Complete this table to show what color notebooks Ms. Corrigan could have given to Bryce, Tanya, Walter, and Ava.

**Notebooks**

<b>Student</b>	<b>Color</b>
Kirk	Red
Stacey	Red
Yolanda	Green
Chuck	Green
Anthony	Blue
Bryce	
Tanya	
Walter	
Ava	

# New England Common Assessment Program Mathematics Tool Kit – Grade 4

Use the shapes to answer questions on the mathematics test.

