



**NEW ENGLAND  
COMMON ASSESSMENT PROGRAM**

**Released Items  
2006**

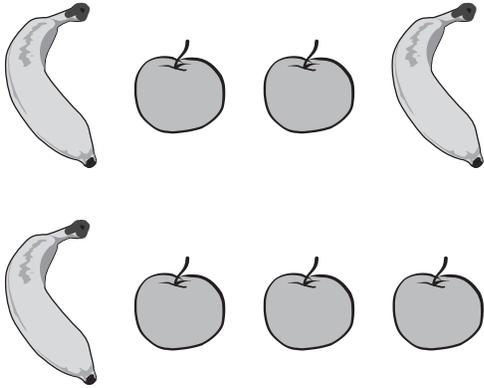
**Grade 4  
Mathematics**

# Mathematics



Item selected from Session One—no calculators or other mathematics tools allowed.

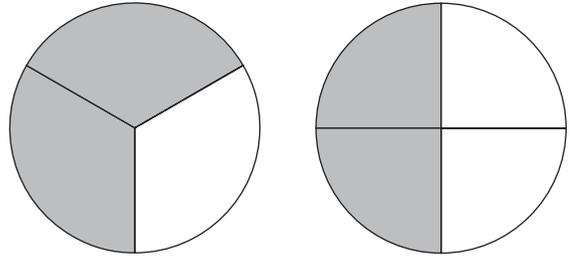
1 Look at this set of fruit.



What fraction of the set of fruit is apples?

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

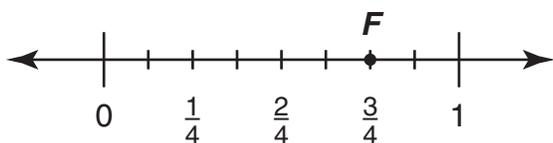
2 Look at these circles.



Which statement is true?

- A.  $\frac{2}{3}$  is less than  $\frac{2}{4}$
- B.  $\frac{2}{3}$  is equal to  $\frac{2}{4}$
- C.  $\frac{2}{3}$  is greater than  $\frac{2}{4}$

- 3 Look at this number line.



What fraction is equivalent to the fraction at point *F* on the number line?

- A.  $\frac{3}{8}$
- B.  $\frac{2}{3}$
- C.  $\frac{6}{8}$
- D.  $\frac{6}{4}$



- 4 Jan solved this problem.

$$\begin{array}{r} 346 \\ + 251 \\ \hline 597 \end{array}$$

Which number sentence could Jan use to prove her answer is correct?

- A.  $597 + 346 = \square$
- B.  $597 - 346 = \square$
- C.  $346 - 251 = \square$
- D.  $251 + 597 = \square$



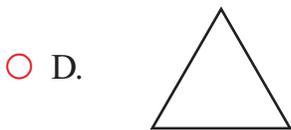
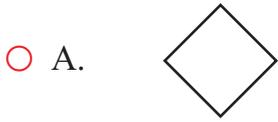
- 5 The chart below shows how many tickets band members have sold to their concert.

	Number of Tickets Sold
Adult	86
Child	51

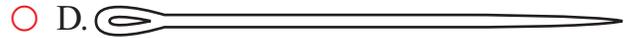
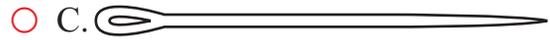
The band members want to sell 200 total tickets. How many more tickets do the band members need to sell?

- A. 137
- B. 127
- C. 73
- D. 63

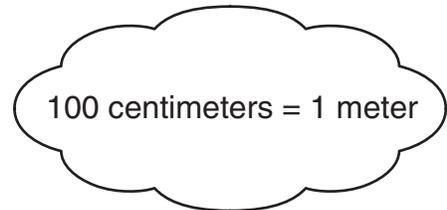
6 An artist is making a window. He needs a piece of glass in the shape of a triangle. All the sides of the triangle must be the same length. Which piece of glass can he use?



7 Use a ruler to answer this question. Which needle is exactly 6 centimeters long?



8 The height of a tree is 368 centimeters. Which measurement also shows the height of the tree?



- A. 3 meters 68 centimeters
- B. 36 meters 8 centimeters
- C. 36 meters 80 centimeters
- D. 300 meters 68 centimeters

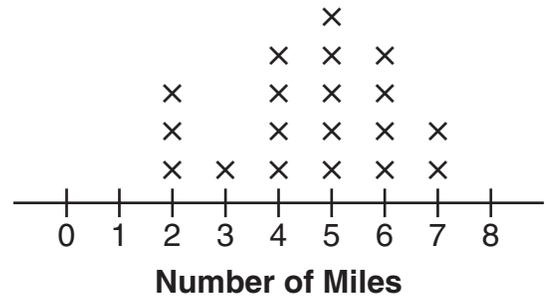
9 Look at this pattern.

50, 41, 32, ?, 14, 5

What number is missing in the pattern?

- A. 9
- B. 23
- C. 24
- D. 33

10 This line plot shows the number of miles each student in Mr. Miller's class rode his or her bike last week.



**Key**  
× represents 1 student

What was the greatest number of miles any student in the class rode his or her bike last week?

- A. 2
- B. 5
- C. 7
- D. 8



11 The chart below describes a number.

<b>Hundreds</b>	<b>Tens</b>	<b>Ones</b>
6	23	5

What is the number?



12 Dave read these clues about a shape.

- It has four sides.
- It has sides that are all different lengths.

Dave guessed the shape is a rhombus. Explain why Dave's guess is correct or incorrect.



- 13 There are 20 students in Mrs. Harrison's class. Each student's name is written on a piece of paper and put in a bag. Mrs. Harrison will pick one piece of paper from the bag.

On the first pick, it is **more likely** that the paper will have a girl's name. On the chart below, write the number of girls and the number of boys that could be in Mrs. Harrison's class.

**Mrs. Harrison's Class**

Students	Number of Students
Girls	
Boys	
Total	20

- 14 a. Shade  $\frac{1}{2}$  of this rectangle.



- b. Shade  $\frac{2}{4}$  of this rectangle.



- c. Circle the statement that is **true**.

$\frac{1}{2}$  is greater than  $\frac{2}{4}$

$\frac{1}{2}$  is less than  $\frac{2}{4}$

$\frac{1}{2}$  is equal to  $\frac{2}{4}$

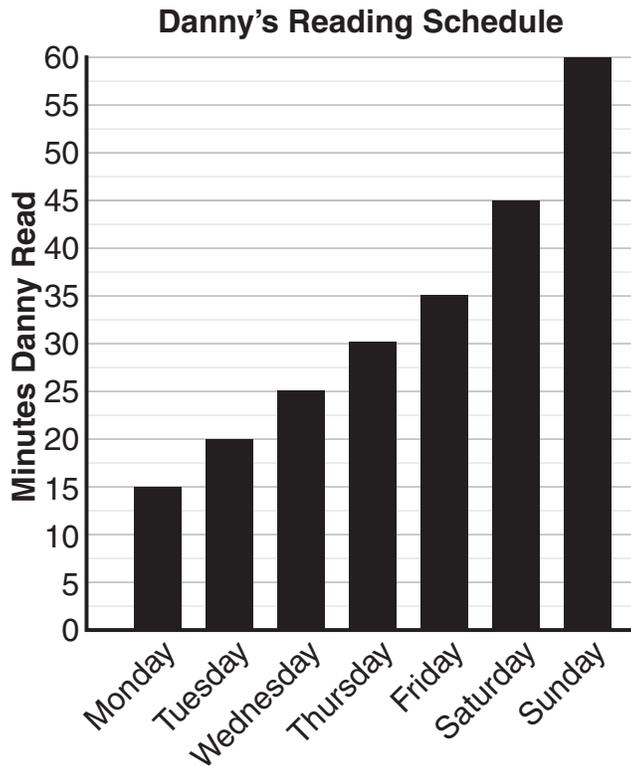


- 15 Look at this number sentence.

$$2 \times 4 = \square \times 8$$

What number makes the number sentence true? Show your work or explain how you know.

- 16 This bar graph shows the number of minutes Danny read each day for a week.



- a. How many more minutes did Danny read on Friday than he read on Thursday?
- b. Use the bar graph to write a question for which the answer is 40 minutes.

## Grade 4 Mathematics Released Item Information

Released Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
No Tools Allowed				✓	✓						✓	✓	✓		✓	
Content Strand <sup>1</sup>	NO	NO	NO	NO	NO	GM	GM	GM	FA	DP	NO	GM	DP	NO	FA	DP
GLE Code	3-1	3-2	3-2	3-3	3-4	3-1	3-7	3-7	3-1	3-2	3-1	3-1	3-5	3-2	3-4	3-1
Depth of Knowledge Code	2	1	2	1	2	2	1	1	2	2	2	2	2	2	2	3
Item Type <sup>2</sup>	MC	SA	SA	SA	SA	SA	SA									
Answer Key	C	C	C	B	D	D	C	A	B	C						
Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2

<sup>1</sup>Content Strand: NO = Numbers & Operations, GM = Geometry & Measurement, FA = Functions & Algebra, DP = Data, Statistics, & Probability

<sup>2</sup>Item Type: MC = Multiple Choice, SA = Short Answer