NEW ENGLAND COMMON ASSESSMENT PROGRAM

Released Items
2006
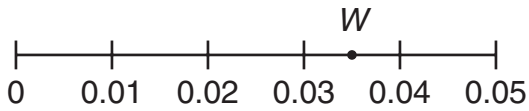
Grade 6
Mathematics

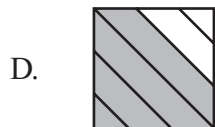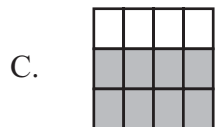# Mathematics

1 Look at this number line.

```
                       W
├────┼────┼────┼────•──┼────┤
0    0.01  0.02  0.03  0.04  0.05
```

What decimal best represents the location of point W?

A. 0.035

B. 0.045

C. 0.350

D. 0.450

2 Which model is shaded gray to represent $\frac{2}{3}$?

A.

B.

C.

D.
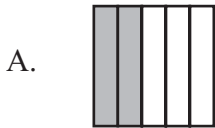
3 Tasha is drawing a map of her town. The chart below shows the distance between Tasha's house and different places in town.
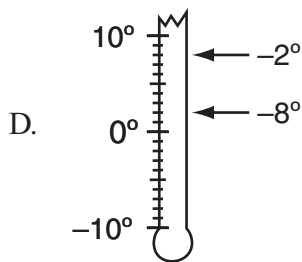
Place	Distance from Tasha's House
Park	$1\frac{3}{8}$ miles
Post Office	$2\frac{1}{4}$ miles
Library	$\frac{3}{4}$ mile
School	$1\frac{2}{3}$ miles

Which place is located more than $1\frac{1}{2}$ miles and less than 2 miles from Tasha's house?

A. Park

B. Post Office

C. Library

D. School

4 Which picture shows the correct position of –2° and the correct position of –8° on the thermometer?

A.

10°
0°   ← –8°
–10°   ← –2°

B.

10°
0°   ← –2°
–10°   ← –8°

C.

10°   ← –8°
        ← –2°
0°
–10°

D.

10°   ← –2°
        ← –8°
0°
–10°
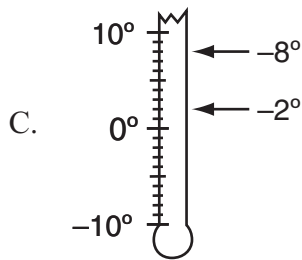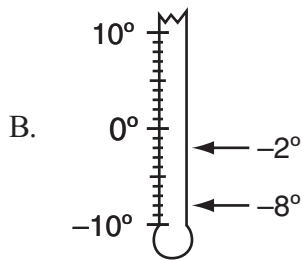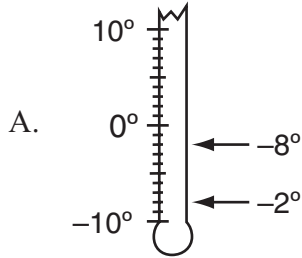
5 Reggie received a free movie ticket for every 15 movies he rented at Sky Videos. Reggie rented 88 movies at Sky Videos. What is the total number of free movie tickets Reggie received?

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

6 Mr. Mason owes $21.28 for his groceries. He pays with a twenty-dollar bill and a five-dollar bill. What is the correct amount of change Mr. Mason will receive?
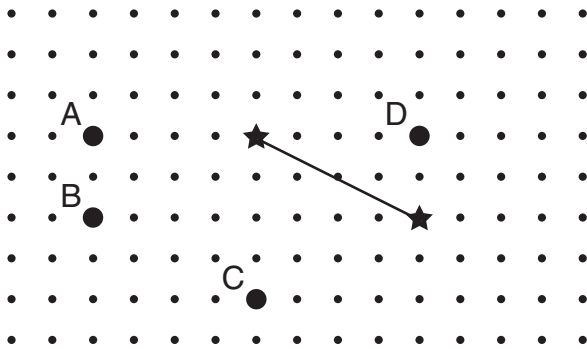
A. $3.72
B. $3.82
C. $4.28
D. $4.72

7 Here are the clues to Gina's number.

- Her number is a factor of 27.
- Her number is a prime number.
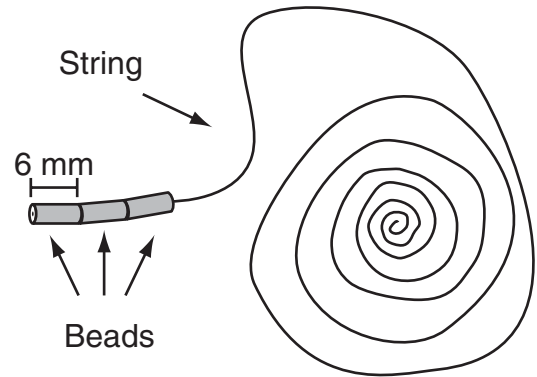
What is Gina's number?

A. 3
B. 5
C. 7
D. 9

8 Marcy is drawing a **right triangle** by placing stars on the grid below and connecting them with line segments.

Which point could be the location of the third star of Marcy's right triangle?

A. Point A
B. Point B
C. Point C
D. Point D

9 Nadia is putting beads on a piece of string, as shown below.

Each bead is 6 mm long. What is the greatest number of beads Nadia can put on a 60 cm string? [1 cm = 10 mm]

A.   10
B.   36
C.   100
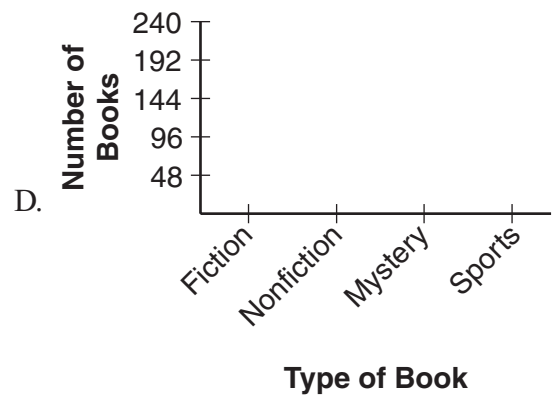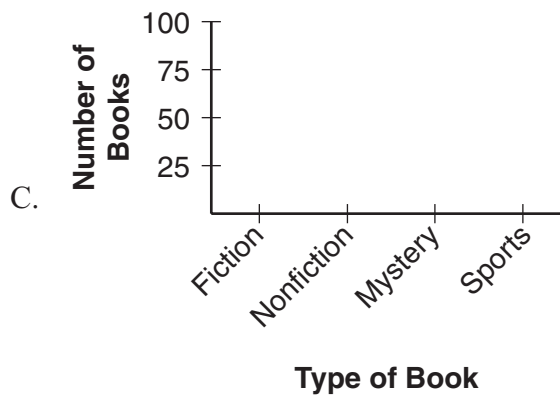D.   3600

10 Look at this chart.

Books Checked Out from the Library

Type of Book	Number of Books
Fiction	48
Nonfiction	18
Mystery	32
Sports	14

The librarian is creating a bar graph of the data in the table. Which scale is **best** for the librarian to use?

A.

Number of Books: 48, 32, 18, 14

Type of Book: Fiction, Nonfiction, Mystery, Sports

B.

Number of Books: 50, 40, 30, 20, 10

Type of Book: Fiction, Nonfiction, Mystery, Sports

C.

Number of Books: 100, 75, 50, 25

Type of Book: Fiction, Nonfiction, Mystery, Sports

D.

Number of Books: 240, 192, 144, 96, 48

Type of Book: Fiction, Nonfiction, Mystery, Sports
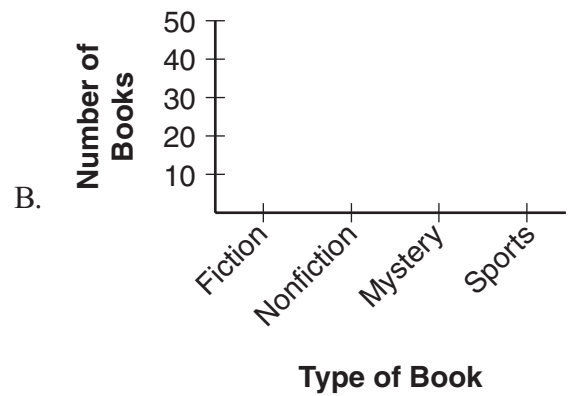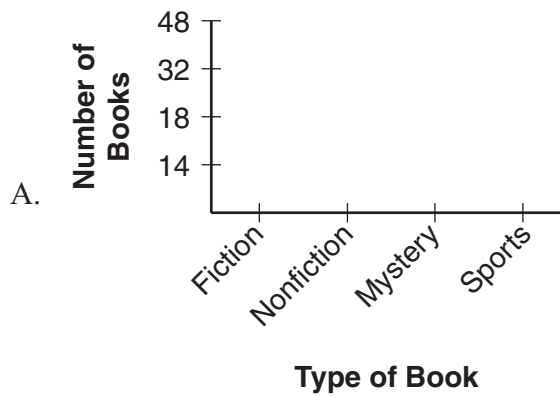
11 The length of Moose Trail is 3.75 kilometers. The length of Boulder Trail is 5.5 kilometers. What is the difference in length between Moose Trail and Boulder Trail?

12 Look at this graph.

**Black Bears in
Evergreen National Forest
from 1996 to 2002**
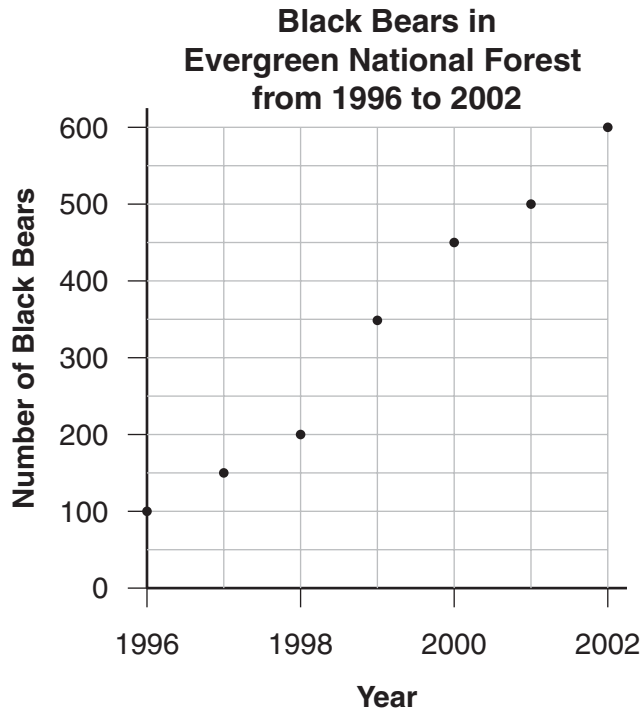
What was the increase in the number of black bears from 1998 to 1999?

13 Jasmine drew a rectangle with the following properties.
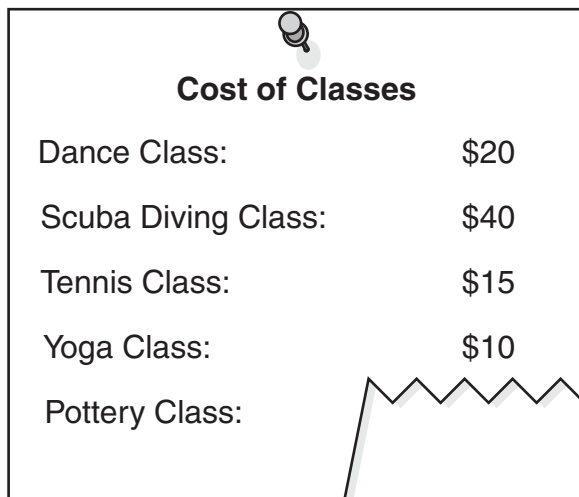
- The area is 32 square centimeters.
- The length is twice the width.

What is the perimeter of Jasmine's rectangle? Show your work or explain how you know.

14 The sign below shows a community center's five classes and the costs of four of the classes. The bottom of the sign is torn.

Cost of Classes

Dance Class:	$20
Scuba Diving Class:	$40
Tennis Class:	$15
Yoga Class:	$10
Pottery Class:	

The average (mean) cost of a class is $22. How much does a pottery class cost at this community center? Show your work or explain how you know.

6

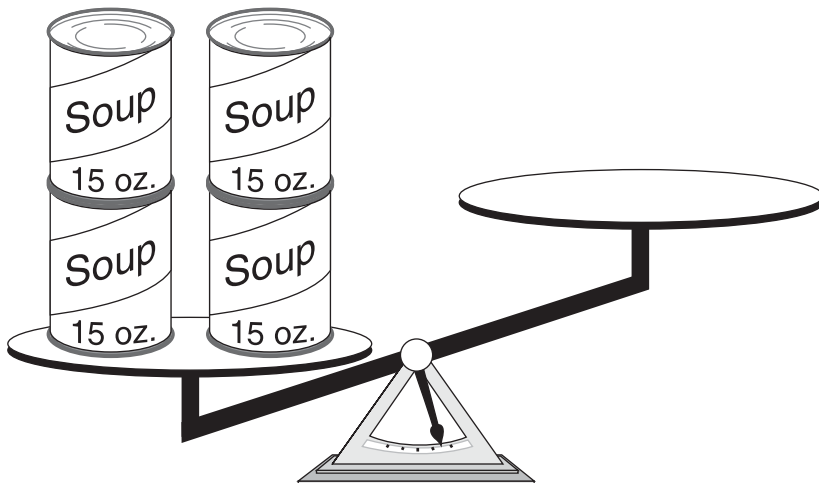**15** Look at this soup can, tuna can, and corn can.
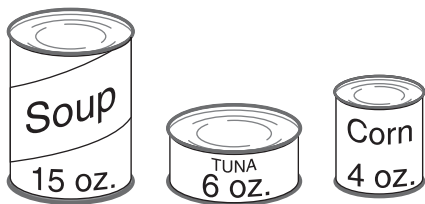
a. Suzi put exactly 2 soup cans and 1 tuna can on the left side of this balance scale.
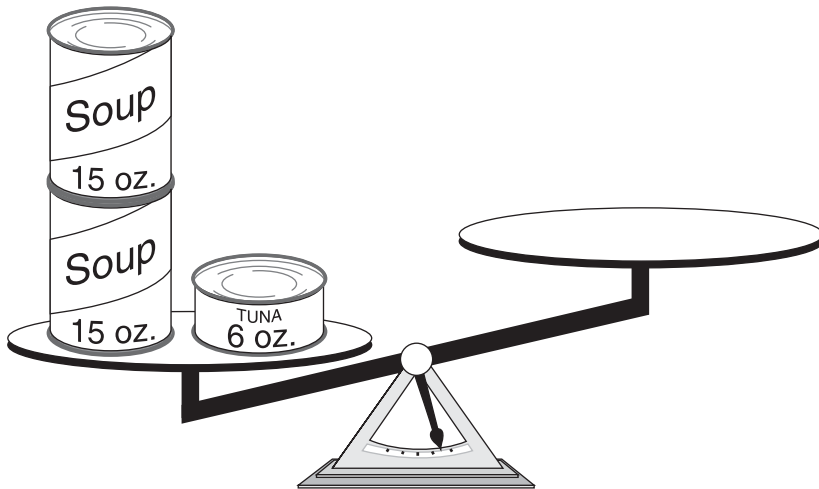
How many corn cans does Suzi need to put on the **right side** to balance the scale? Show your work or explain how you know.

b. Nathan put exactly 4 soup cans on the left side of this balance scale.

• Nathan will put **only** tuna and corn cans on the right side.

• He will put at least one corn can and one tuna can on the right side.

How many tuna cans and how many corn cans could Nathan put on the **right side** to balance the scale? Show your work or explain how you know.

Grade 6 Mathematics Released Item Information

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

[1]Content Strand: NO = Numbers & Operations, GM = Geometry & Measurement, FA = Functions & Algebra, DP = Data, Statistics, & Probability

[2]Item Type: MC = Multiple Choice, SA = Short Answer, CR = Constructed Response