



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

**Released Items
2009**

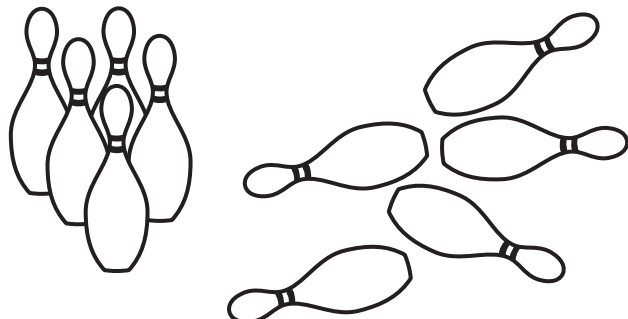
**Grade 6
Mathematics**

Mathematics



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

- 1 The picture below shows bowling pins.



What percent of the bowling pins are standing?

- A. 5%
 - B. 10%
 - C. 25%
 - D. 50%
- 2 This table shows the unit price of four different brands of peanut butter.

Brand Name	Unit Price
Grand Nutty	\$0.078
Hinkman's	\$0.08
Wholesome	\$0.081
Jolly Butter	\$0.079

Which brand of peanut butter has the **lowest** unit price?

- A. Grand Nutty
- B. Hinkman's
- C. Wholesome
- D. Jolly Butter

- 3 Roberta cut a 95-inch board of wood into 14-inch sections. How many 14-inch sections did she cut?

- A. 5
- B. 6
- C. 7
- D. 8



- 4 Stewart needs to cut $\frac{3}{4}$ cup of carrots for a salad. He has already cut $\frac{1}{2}$ cup of carrots. How much more does Stewart need to cut?

- A. $\frac{1}{8}$ cup of carrots
- B. $\frac{1}{4}$ cup of carrots
- C. $\frac{2}{6}$ cup of carrots
- D. $\frac{1}{2}$ cup of carrots



- 5 A mouse has a resting heart rate of 400 beats per minute. An elephant has a resting heart rate of 40 beats per minute. In one hour at rest, how many more beats does a mouse's heart make than an elephant's heart?

- A. 600
- B. 2,160
- C. 21,600
- D. 22,400



6 Look at Figure P.

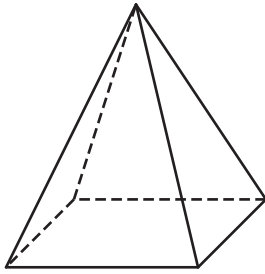
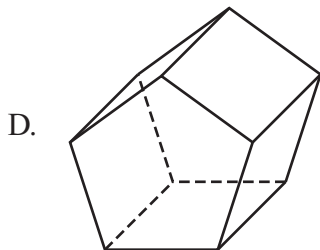
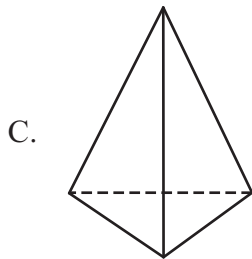
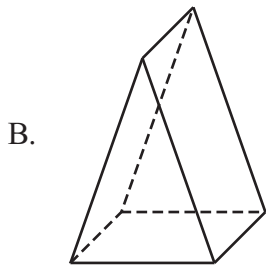
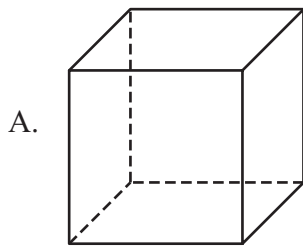


Figure P

Which figure has the same number of faces as Figure P?



7 Look at this table.

Input	Output
3	12
5	20
?	36
12	48

What is the input when the output is 36?

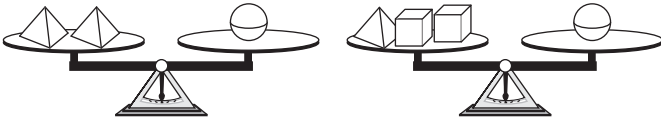
- A. 6
- B. 7
- C. 8
- D. 9

8 The student council used the expression $4 \cdot n - 30$ to calculate the profit (in dollars) they earned by selling n pieces of pie at a bake sale. The student council sold 38 pieces of pie at the bake sale. How much profit did the student council earn?

- A. \$ 12
- B. \$ 32
- C. \$122
- D. \$182



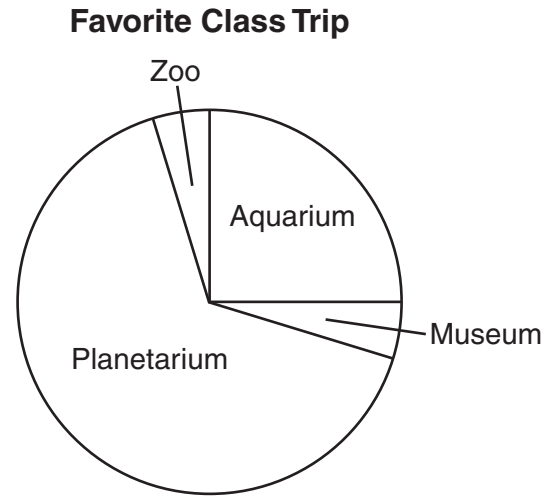
9 The two scales shown below are balanced.



Each weighs the same. Each weighs the same. Each weighs the same. Which list gives the shapes in order from lightest to heaviest?

- A.
- B.
- C.
- D.

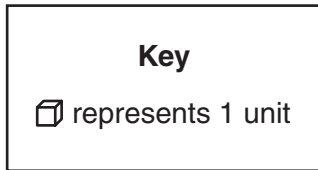
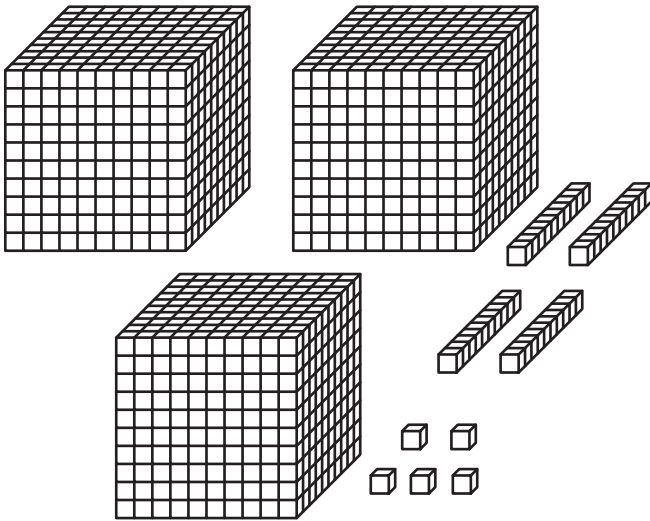
10 Ms. Jordan surveyed her students about their favorite class trip. She displayed the results in this circle graph.



About what percent of Ms. Jordan's students chose the planetarium as their favorite class trip?

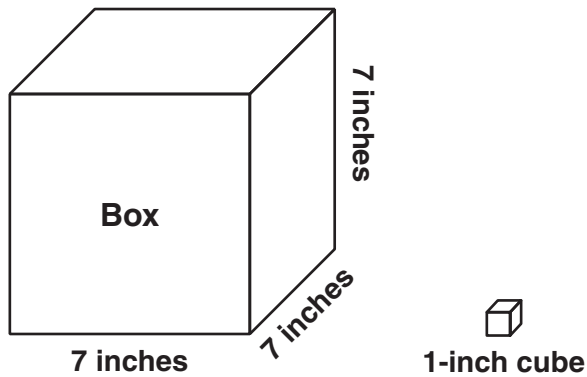
- A. 25%
- B. 55%
- C. 65%
- D. 75%

11 Look at these blocks.



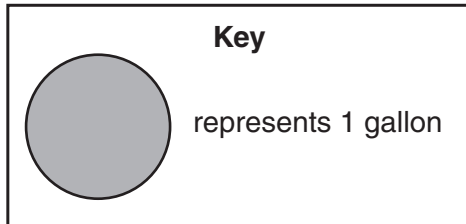
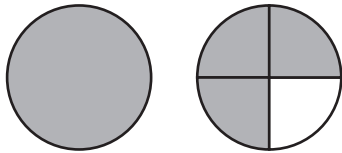
What is the value of these blocks?

12 Look at the box and the 1-inch cube.



What is the greatest number of 1-inch cubes that can fit into the box?

- 13 Look at this picture.



The picture shows the number of gallons of water the Mitchell family drank in one day.

- Write a mixed number that represents the number of gallons the Mitchell family drank.
- One full glass holds $\frac{1}{8}$ gallon of water. The Mitchell family drank only full glasses of water on that day. How many full glasses of water did the Mitchell family drink?



- 14 Lisa made this list to show the ages, in years, of twelve children at a park.

6, 10, 4, 2, 3, 2, 14, 5, 1, 2, 5, 9

- What is the range of ages of these twelve children?

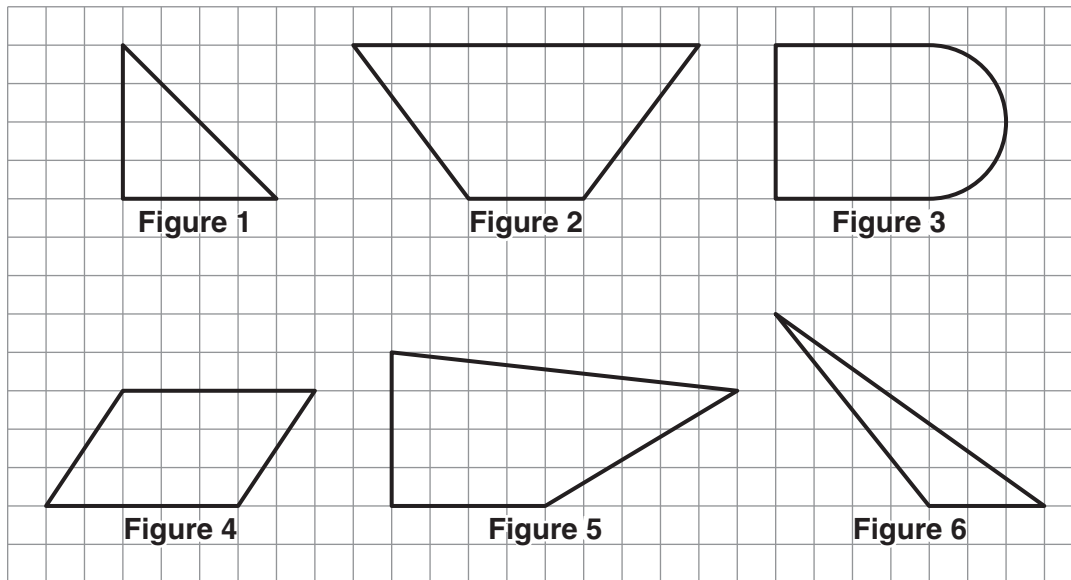
Lisa made this statement.

The range of ages of students in grades 4, 5, and 6 at a school is greater than the range of ages of the children at the park.

- Explain why Lisa's statement is correct **or** why Lisa's statement is incorrect.



15 Look at the figures on this grid.



Jill gave these three clues about one of the figures.

- Clue 1: It is a polygon.
- Clue 2: It has **exactly one** pair of congruent sides.
- Clue 3: It contains **at least one** obtuse angle.

a. Which **two** figures fit all three of Jill's clues?

b. Write a fourth clue that Jill could give so that **only one** figure would fit all four clues.

Mathew gave exactly two clues about Figure 6. Figure 6 is the only figure that fits his two clues.

c. What could be the **two** clues that Mathew gave?