



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

**Released Items
2010**

**Grade 6
Mathematics**

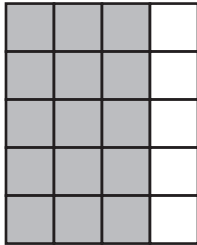
Mathematics



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



- 1 Sally planted pumpkin seeds. She shaded part of this rectangle gray to represent the percent of the pumpkin seeds that sprouted.



What percent of the pumpkin seeds sprouted?

- A. 15%
- B. 60%
- C. 75%
- D. 80%

- 2 The table below shows the different weights of ingredients Melissa bought to make soup.

Soup Ingredients

| Ingredient | Weight (in pounds) |
|------------|--------------------|
| Onions | 1.09 |
| Carrots | 1.3 |
| Potatoes | 1.13 |
| Chicken | 1.22 |

Which list shows the weights of the ingredients in order from **least** to **greatest**?

- A. 1.3, 1.09, 1.13, 1.22
- B. 1.3, 1.13, 1.22, 1.09
- C. 1.09, 1.13, 1.22, 1.3
- D. 1.09, 1.3, 1.13, 1.22

- 3 Samantha ordered 61 picture frames for her business. The frames are mailed in boxes that can each hold 7 frames. What is the least number of boxes that can be used to mail Samantha's picture frames?

- A. 5
- B. 6
- C. 8
- D. 9



- 4 Emily spent $\frac{1}{4}$ hour fixing the broken chain on her bike and $\frac{1}{6}$ hour filling her bike tires with air. How much time in all did Emily work on her bike?

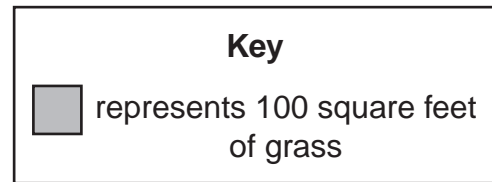
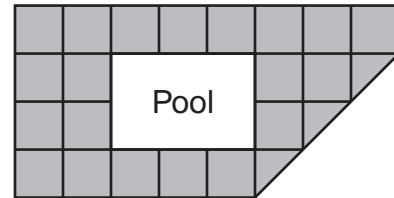
- A. $\frac{2}{10}$ hour
- B. $\frac{5}{24}$ hour
- C. $\frac{3}{12}$ hour
- D. $\frac{5}{12}$ hour



- 5 A dog shelter uses 75 pounds of dog food each day. A 25-pound bag of dog food costs \$20. How much money does the dog shelter spend on dog food for 14 days?

- A. \$ 120
- B. \$ 280
- C. \$ 840
- D. \$1240

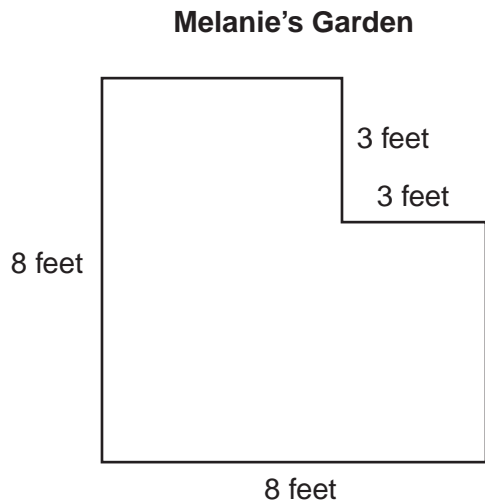
- 6 This diagram shows the area of grass around a pool.



What is the area of the grass in the diagram?

- A. 2150 square feet
- B. 2200 square feet
- C. 2300 square feet
- D. 2750 square feet

- 7 The diagram below shows Melanie's garden.



Melanie plans to put a fence along the border of her garden. What is the minimum number of feet of fencing she needs?

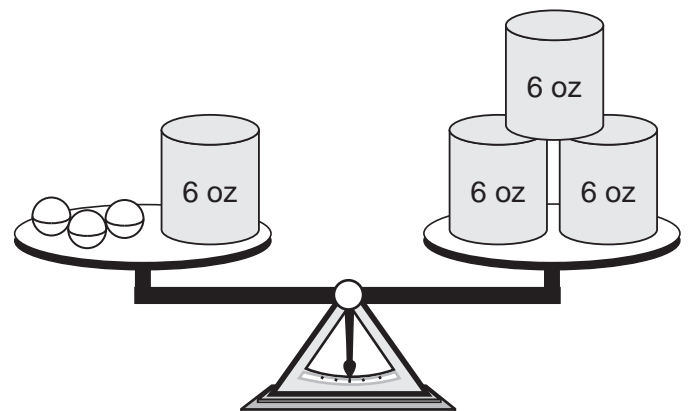
- A. 22
 - B. 32
 - C. 58
 - D. 64
- 8 Tanya is 4 feet 7 inches tall. What is her height in inches? [1 foot = 12 inches]
- A. 47 inches
 - B. 48 inches
 - C. 55 inches
 - D. 57 inches

- 9 Donna raises money for her school chorus program by walking in a race.

- Mrs. Stephens gives a total of \$5.
- Mr. Jones gives \$2 for every mile Donna walks in the race.

Donna walks m miles. Which expression represents the total amount of money she receives from Mrs. Stephens and Mr. Jones?

- A. $2 + 5 \cdot m$
 - B. $5 + 2 \cdot m$
 - C. $7 \cdot m$
 - D. $7 + m$
- 10 The scale below is balanced.



How many ounces does one \ominus weigh?

- A. 4 oz
- B. 8 oz
- C. 9 oz
- D. 21 oz

11 Which number fits these two clues?

- Clue 1: It is a prime number.
- Clue 2: It is a factor of both 42 and 91.



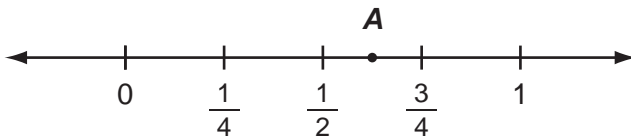
12 Look at this pattern.

1, 5, 3, 7, 5, 9, 7, 11, ?, ?

What are the next two numbers in the pattern?

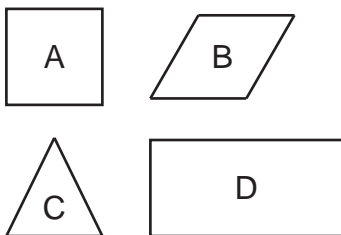


13 Look at this number line.



Point A is halfway between $\frac{1}{2}$ and $\frac{3}{4}$. What fraction does point A represent? Show your work or explain how you know.

- 14 Kendrick is making a square pyramid. He will trace some of these shapes to make the faces of his pyramid. For each face, he will trace a whole shape.



- a. Which shapes will Kendrick trace?
- b. How many times will he trace each shape to make the faces of his square pyramid?
- 15 This table shows Kevin's first 5 test scores in math class.

Test Scores

| Test Number | Test Score |
|-------------|------------|
| 1 | 75 |
| 2 | 90 |
| 3 | 82 |
| 4 | 84 |
| 5 | 94 |

- a. What is Kevin's median test score?
- b. What is Kevin's mean test score?
- c. What score does Kevin need to earn on his next math test in order to have a mean score of exactly 87 for the 6 tests? Show your work or explain how you know.