



**NEW ENGLAND  
COMMON ASSESSMENT PROGRAM**

**Released Items  
2010**

**Grade 5  
Mathematics**

# Mathematics

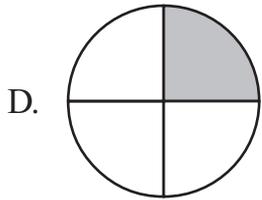
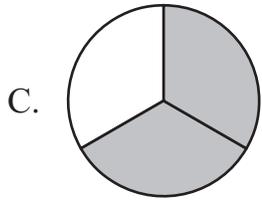
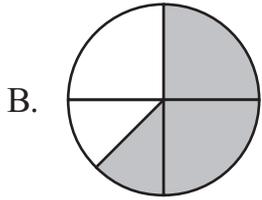
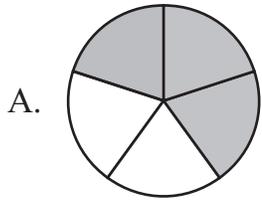


Items with this symbol were selected from Session One—no calculators or other mathematics tools allowed.

- 1 Look at this set of apples.



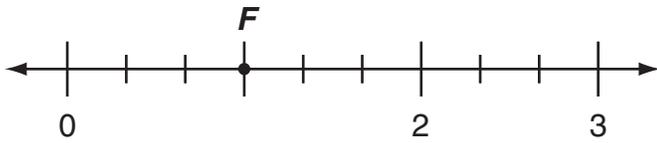
Some of the apples in this set were eaten. Which circle is shaded gray to represent the fraction of the set of apples that was eaten?



- 2 Which digit of this number will change when ten thousand is added to 24,150?

- A. 2
- B. 4
- C. 1
- D. 5

3 Look at this number line.

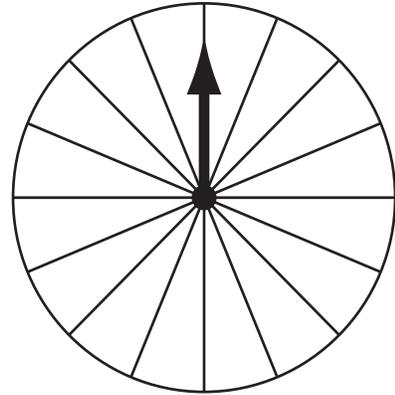


What number is shown by point  $F$ ?

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



4 Jeremiah has a spinner that is divided into 16 equal sections, as shown below.



Jeremiah will color the sections of the spinner using the fractions listed below.

- $\frac{4}{16}$  red
- $\frac{1}{8}$  blue
- $\frac{3}{8}$  green
- $\frac{1}{4}$  yellow

Which color will take up the greatest amount of space on the spinner?

- A. red
- B. blue
- C. green
- D. yellow



5 Look at this number sentence.

$$3 \times \star = 195$$

Each  $\star$  represents the same number.  
Which number sentence is true?

- A.  $195 - \star = 3$
- B.  $195 \times 3 = \star$
- C.  $195 - 3 - 3 - 3 = \star$
- D.  $195 - \star - \star - \star = 0$

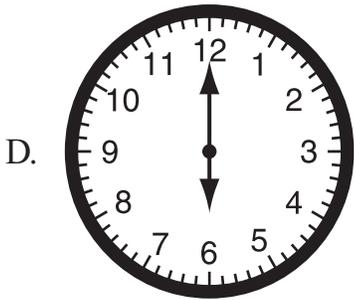
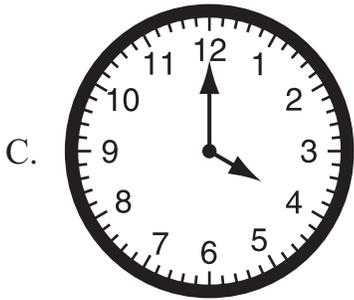
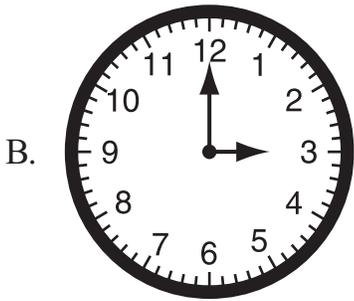
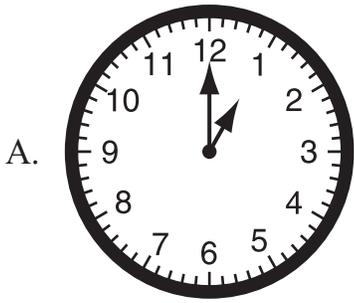
6 You may use this calendar to help you answer this question.

April						
Sun.	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

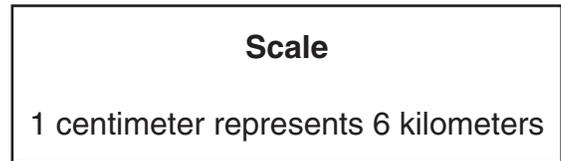
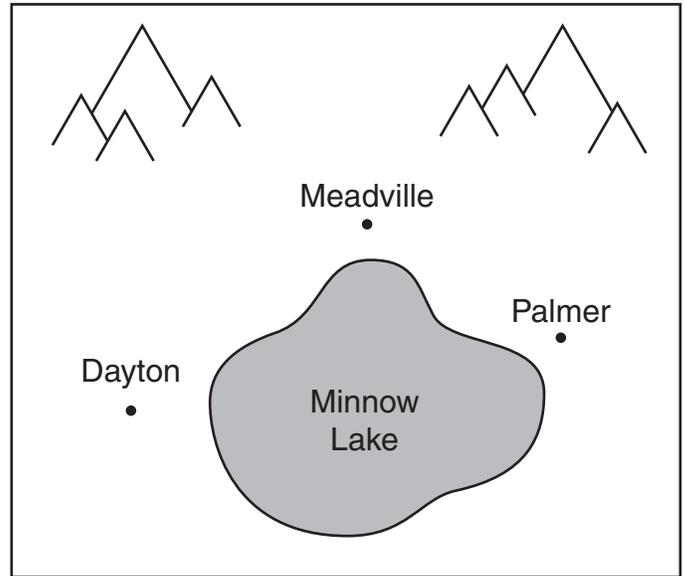
On April 1, Molly had a guitar lesson and a piano lesson. She has a guitar lesson every 8 days and a piano lesson every 12 days. What is the next date that Molly will have **both** a guitar lesson and a piano lesson?

- A. April 13
- B. April 17
- C. April 21
- D. April 25

7 In which clock is the angle between the hour hand and the minute hand less than  $90^\circ$ ?



8 Use your ruler and the map below to answer this question.

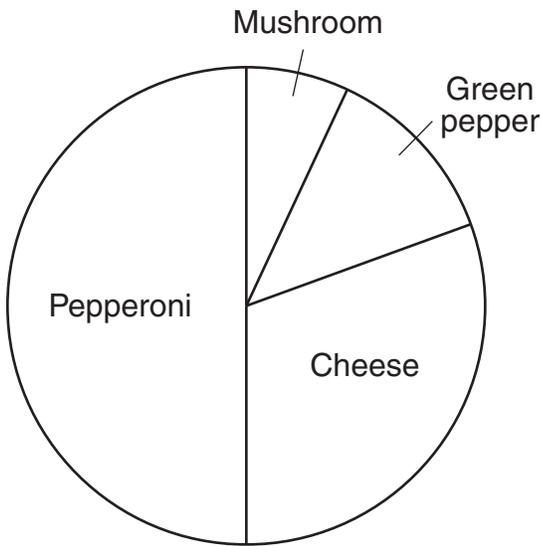


The McMillans biked from Dayton to Palmer by going through Meadville. What is the least number of kilometers the McMillans could have biked?

- A. 7 kilometers
- B. 13 kilometers
- C. 33 kilometers
- D. 42 kilometers

- 9 This graph shows the favorite pizza toppings of students in Kayla's class. Each student chose one topping.

### Favorite Pizza Toppings



Which statement is true based on the data in the graph?

- A. The most students chose cheese as their favorite topping.
- B. The fewest students chose mushroom as their favorite topping.
- C. More than half the students chose cheese as their favorite topping.
- D. More than half the students chose either mushroom or green pepper as their favorite topping.

- 10 Chester's dad let him choose what to have for dinner. This table shows the drinks, main dishes, and desserts that Chester could choose.

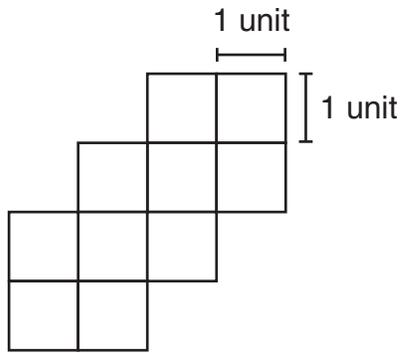
### Dinner Choices

Drink	Main Dish	Dessert
Milk	Pizza	Cake
Juice	Chicken	Pie
	Pasta	

How many different ways could Chester choose one drink, one main dish, and one dessert?

- A. 7
- B. 9
- C. 10
- D. 12

- 11 The figure below is made of squares that are all the same size.



What is the perimeter of the figure?

- 12 The table below shows the ages of Selene's cousins.

**Ages of Selene's Cousins**

Name	Age (in years)
Scott	8
Tabitha	3
David	7
Nadia	3
Craig	15
Stephen	2
Candace	5

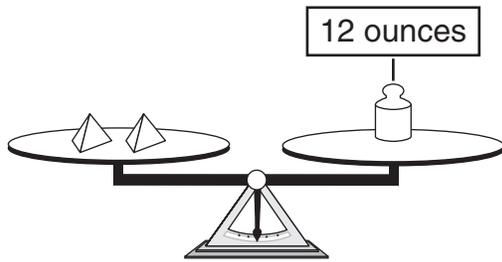
What is the median age of Selene's cousins?



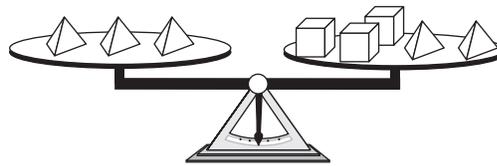
- 13 A package of 3 tubes of toothpaste costs \$3.49. The cost of a single tube of toothpaste is \$1.25. How much more will it cost to buy 3 single tubes of toothpaste than to buy a package of 3 tubes of toothpaste? Show your work or explain how you know.
- 14 a. Use mathematical language to describe one way that a cylinder and a rectangular prism are **alike**.
- b. Use mathematical language to describe one way that a cylinder and a rectangular prism are **different**. Use the term “base” in your response.

- 15 The scales shown below are balanced.

Scale 1



Scale 2



Each  has the same weight.

Each  has the same weight.

- What is the weight, in ounces, of one ?
- What is the weight, in ounces, of one ? Show your work or explain how you know.
- Kevin will use some of these  **and**  to balance a 24-ounce weight. Based on your answers from part a and part b, what combination of  and  can he use to balance 24 ounces? Be sure to label your answer with  and .