
# New England Common Assessment Program

## Released Items 2011

## Grade 5 Mathematics

# Mathematics

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

❶ What number is equivalent to 4 thousands + 6 hundreds + 23 tens + 5 ones?

A. 46,235
B. 4,925
C. 4,835
D. 4,628

❷ Look at this chart.

| Name of State | Area (in square kilometers) |
|---|---|
| New Hampshire | 24,043 |
| Vermont | 24,903 |

A forest has an area that is greater than the area of New Hampshire and less than the area of Vermont. Which measurement could be the area of the forest?

A. 24,030 square kilometers
B. 24,920 square kilometers
C. 24,100 square kilometers
D. 24,005 square kilometers

❸ Mr. Drake put 84 books into boxes. He put 12 books in each box. Mr. Drake determined the number of boxes needed by solving the problem below.

| Divide 84 by 12. |
|---|

What is another way to solve this problem?

A. Divide 12 by 84.

B. Multiply 12 by 84.

C. Count the number of times 12 can be subtracted from 84 until 0 is reached.

D. Find a number that can be added to 12 to reach 84.

❹ This rectangle is shaded gray to represent 1 whole.

Which rectangle is shaded gray to represent the sum of $\frac{3}{5}$ and $\frac{1}{5}$?

A. 

B. 

C. 

D. 

**5** Cassandra and Jolene scooped candy into bags at the movie theater. Cassandra's bag weighed $\frac{2}{8}$ pound. Jolene's bag weighed $\frac{3}{8}$ pound **more than** Cassandra's bag. How many pounds did Jolene's bag weigh?

A. $\frac{1}{8}$ pound

B. $\frac{3}{8}$ pound

C. $\frac{5}{8}$ pound

D. $\frac{5}{16}$ pound

**6** Reggie is standing next to a pine tree that is 15 meters tall. Reggie is 1.6 meters tall. How many meters taller is the pine tree than Reggie?

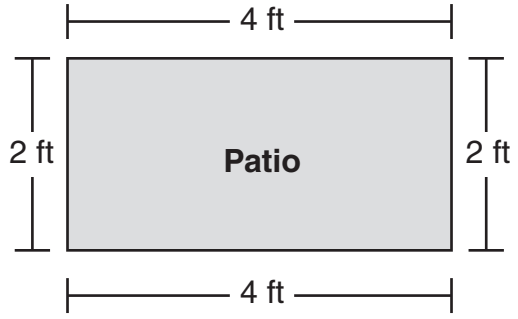
A. 13.4 meters

B. 14.4 meters

C. 14.6 meters

D. 16.6 meters

❼ This picture shows the shape of a patio.




What is the area of the patio?

A. 16 square feet
B. 12 square feet
C. 8 square feet
D. 6 square feet

❽ This table shows the amount of money fifth-grade students will collect for selling different numbers of raffle tickets.

**Raffle Ticket Sales**

| **Number of Tickets Sold** | 10 | 20 | 30 | 40 |
|---|---|---|---|---|
| **Money Collected** | $5 | $10 | $15 | $20 |

Based on this table, how many raffle tickets do the students need to sell to collect $70?

A. 35
B. 90
C. 140
D. 350

**9** This expression represents the number of cans needed to hold $t$ tennis balls.

$$t \div 3$$

How many cans are needed to hold 54 tennis balls?

A. 18

B. 51

C. 57

D. 162

**10** Look at these number sentences.

$$\square + 8 = 24$$

$$\square \div \triangle = 8$$

Each $\square$ has the same value in both of these number sentences.

The $\triangle$ has a different value than the $\square$. What is the value of the $\triangle$?

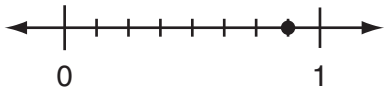
A. 2

B. 3

C. 8

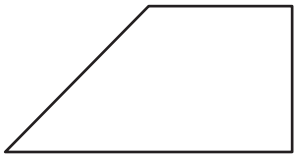
D. 16

⓫ Look at this number line.



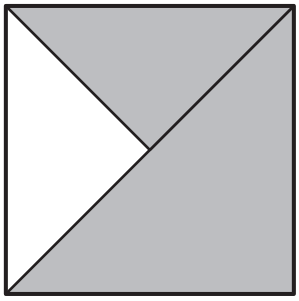

What fraction represents the location of the dot?

⓬ Copy this figure into your Student Answer Booklet.



- Put an *M* next to each angle with a measure of **more** than 90°.
- Put an *L* next to each angle with a measure of **less** than 90°.
- Put an *E* next to each angle with a measure **equal** to 90°.

❸ Dylan shaded part of this square gray to represent a fraction.



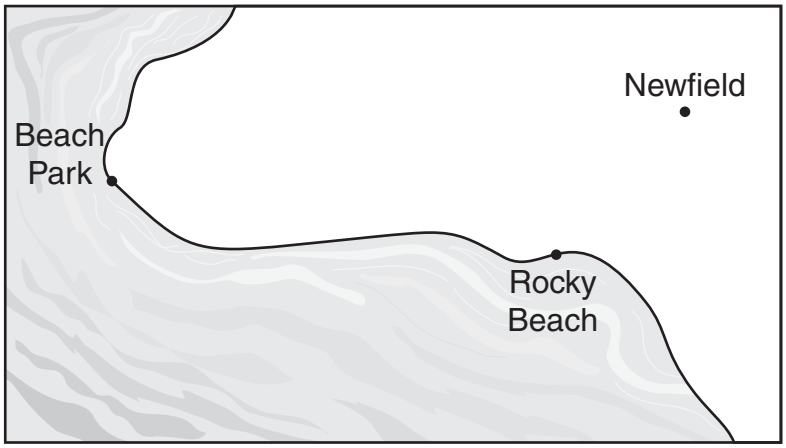
**Dylan's Square**

Dylan explained that he shaded the square to represent the fraction $\frac{2}{3}$, because he shaded 2 parts gray out of a total of 3 parts.

a. What is the mistake in Dylan's explanation?

b. What fraction of the square is shaded gray?

**14** Look at this map.



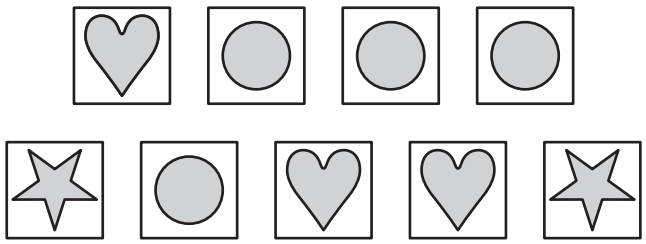

**Scale**
1 inch represents 20 miles

Use a ruler to help you answer this question.

How many **more** miles are between Newfield and Beach Park than between Newfield and Rocky Beach? Show your work or explain how you know.

**15** Malana has these nine cards.

**Malana's Cards**



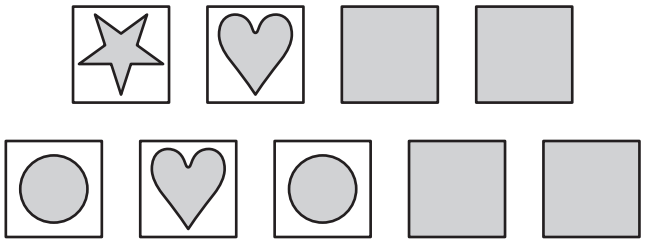
Malana turns her cards facedown and mixes them. Then she picks one of her cards.

a. What is the probability that Malana picks a card with a star on it?

b. What is the probability that Malana does **not** pick a card with a heart on it?

Kelly has these nine cards. Each card has a star, a heart, or a circle on it. Four of Kelly's cards are facedown, as shown below.

**Kelly's Cards**



Kelly turns the rest of her cards facedown and mixes them. Then she picks one of her cards.

- The probability that Kelly picks a card with a star on it is 3 out of 9.
- The probability that Kelly picks a card with a circle on it is less than the probability that she picks a card with a star on it.

c. What is the probability that Kelly picks a card with a heart on it? Show your work or explain how you know.