



**NEW ENGLAND
COMMON ASSESSMENT PROGRAM**

**Released Items
2008**

**Grade 6
Mathematics**

Mathematics

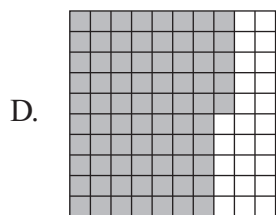
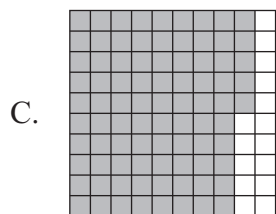
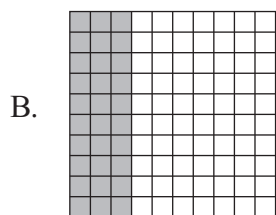
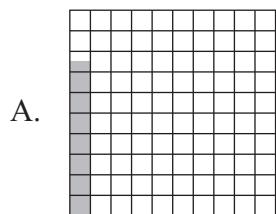


Items with this symbol were selected from Session One—no calculators or other mathematics tools allowed.

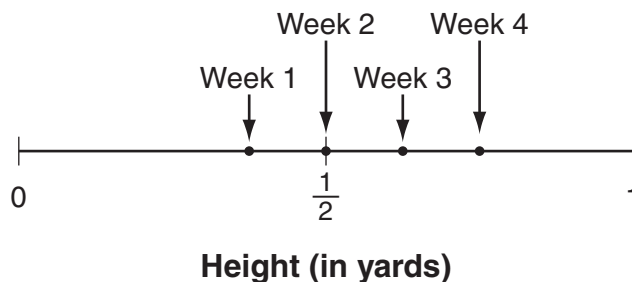
- 1 A fraction of the fish shown below are shaded gray.



Which grid is shaded gray to represent a fraction with the same value?



- 2 Nicole measured the height of a tomato plant at the end of each week. Her measurements are labeled on the number line below.



At the end of which week was the height of the tomato plant about $\frac{5}{8}$ yard?

- A. Week 1
- B. Week 2
- C. Week 3
- D. Week 4



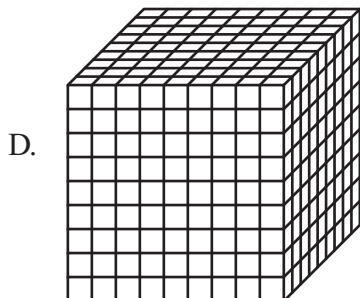
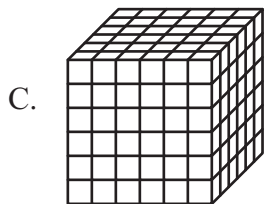
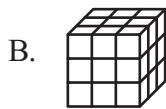
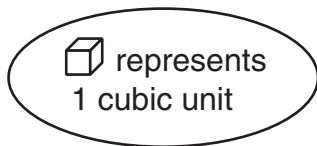
- 3 Maria had $\frac{3}{4}$ yard of ribbon. Then she used $\frac{1}{3}$ yard of the ribbon to decorate a box. How much ribbon does Maria have now?

- A. $\frac{1}{12}$ yard
- B. $\frac{5}{12}$ yard
- C. $\frac{1}{2}$ yard
- D. $\frac{2}{3}$ yard

- 4 Which shape is possible?
- A. a rhombus with 4 acute angles
 - B. a parallelogram with 4 angles of equal measure
 - C. a rhombus with sides that measure 4 cm, 4 cm, 8 cm, and 8 cm
 - D. a parallelogram with sides that measure 2 cm, 4 cm, 6 cm, and 8 cm



- 5 Which cube has a volume of 27 cubic units?



- 6 Hannah is stenciling a border on a wall. She plans to repeat pictures of a tulip, a daisy, a rose, and a lily, in that order, as shown below.

tulip, daisy, rose, lily, tulip, daisy, rose, lily, . . .

The first flower Hannah stencils is a tulip. What will be the 30th flower she stencils?

- A. a tulip
- B. a daisy
- C. a rose
- D. a lily

- 7 Keesha has n marbles. Li has 3 fewer than 4 times the number of marbles that Keesha has. Which expression shows the number of marbles Li has?

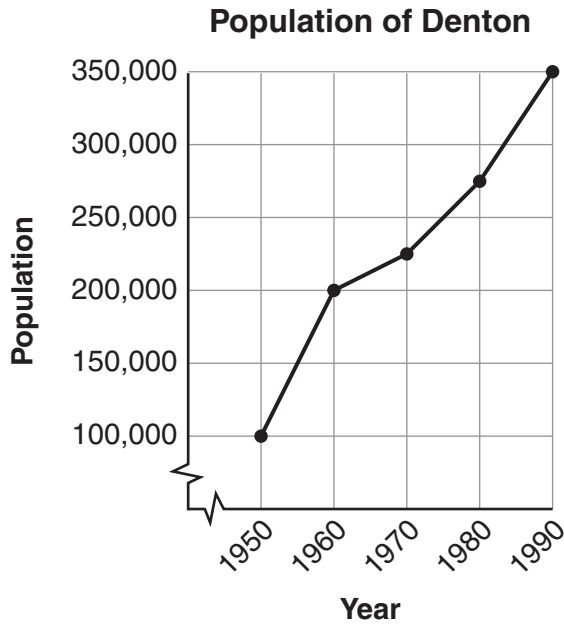
- A. $4 \cdot n - 3$
- B. $3 - 4 \cdot n$
- C. $4 + n - 3$
- D. $3 - 4 + n$

- 8 One cup of milk has the same amount of calcium as 6 oranges. One orange has the same amount of calcium as 2 eggs. How many eggs have the same amount of calcium as one cup of milk?

- A. 3
- B. 4
- C. 8
- D. 12



9 Look at this graph.



During which time period did Denton's population increase by about 50,000?

- A. between 1950 and 1960
- B. between 1960 and 1970
- C. between 1970 and 1980
- D. between 1980 and 1990

10 Three students collected data for a school project.

- Anita asked her classmates which season they liked best.
- Kevin measured and recorded the height of the snow in his backyard every 15 minutes during a 2-hour snowstorm.
- Rachel recorded the total snowfall amounts in 3 different towns.

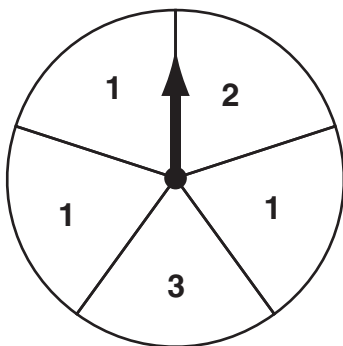
Who should use a line graph to display their data?

- A. Kevin only
- B. Rachel only
- C. Anita and Rachel only
- D. Kevin and Rachel only

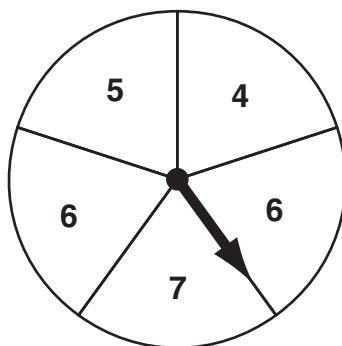
- 11 Jeff bought 6 quarts of juice for a party. One glass holds 8 fluid ounces of juice. What is the total number of glasses Jeff can fill with the juice he bought? [1 quart = 32 fluid ounces]



- 12 Look at these spinners.



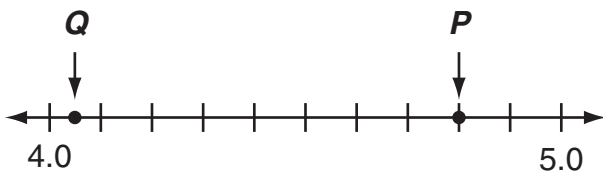
Spinner A (tens digit)



Spinner B (ones digit)

Lydia will use these spinners to form a two-digit number. She will use the number the arrow on Spinner A lands on as the tens digit and the number the arrow on Spinner B lands on as the ones digit. Lydia will spin each arrow once. What two-digit number is Lydia **most likely** to form?

- 13 Look at this number line.



- What is the value of point P ?
- What is the value of point Q ?

14 Sasha painted wooden cylinders and wooden cones.

- She painted a total of 12 bases.
- She painted the same number of cylinders as cones.

How many cones and how many cylinders did Sasha paint? Show your work or explain how you know.



15 Look at the shapes in this chart.

Shape H	Shape R	Shape Z

a. If Shape H represents 1, what number does Shape R represent?

b. If Shape Z represents $\frac{3}{4}$, what number does Shape H represent? Show your work or explain how you know.

c. If Shape R represents $\frac{1}{6}$, what number does Shape Z represent? 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	GM	GM	FA	FA	FA	DP	DP	GM	DP	NO	GM	NO
GLE Code	5-1	5-2	5-4	5-1	5-6	5-1	5-3	5-4	5-1	5-3	5-7	5-5	5-1	5-3	5-1
Depth of Knowledge Code	2	2	2	2	2	2	1	2	2	2	2	2	2	3	3
Item Type ²	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	SA	SA	SA	SA	CR
Answer Key	D	C	B	B	B	B	A	D	C	A					
Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4

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

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