New England Common Assessment Program

Released Items
2005

Grade 7
Mathematics

Mathematics

1 In an election, for every 4 people who voted for Mr. Smith, 1 person voted for Mr. Jones. Which fraction of the votes did **Mr. Smith** receive?

A. $\frac{1}{4}$

B. $\frac{1}{5}$

C. $\frac{3}{4}$

D. $\frac{4}{5}$

2 Angie has $5.00 to buy as many peaches as possible. She knows that the price of peaches is $0.89 or $0.99 per pound. What is the best estimate of the number of pounds of peaches Angie can buy?

A. less than 1 pound

B. between 4 and 5 pounds

C. between 5 and 6 pounds

D. between 8 and 9 pounds

3 Mr. Taylor is buying one granola bar for each of his students.

- There are 30 students.
- There are 6 granola bars in each box.
- The price of a box of granola bars is $2.16.

What is the total cost of the granola bars?

A. $ 6.48

B. $10.80

C. $12.96

D. $64.80

4 A polygon has **no** congruent sides. Which kind of polygon **could** it be?

A. rectangle

B. rhombus

C. square

D. trapezoid

5 A tire on a car measures 16 inches from where it touches the ground to the highest point on top of the tire. What is the radius of the tire?

A. 8 inches

B. 16 inches

C. 32 inches

D. 48 inches

6 Students are using string to make projects in art class.

- There are 200 students.
- Each student needs 75 centimeters of string.

How many **meters** of string are needed in all?

A. 1.5 meters

B. 15 meters

C. 150 meters

D. 1500 meters

7 Jesse keeps a chart of how many miles she runs each day.

Running Chart

Day	1	2	3	4
Distance (in miles)	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$

If the pattern continues, how many miles will Jesse run on Day 6?

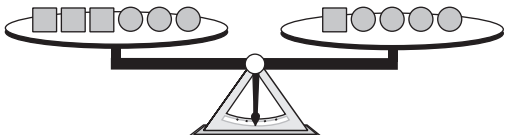
A. $2\frac{1}{2}$

B. $2\frac{3}{4}$

C. 4

D. 9

8 Look at this scale.



The scale is balanced.

Which does ● equal?

A. ■

B. ■ ●

C. ● ■

D. ■ ■

9 For the Book Club, Serena made a stem-and-leaf plot showing the number of pages each person read yesterday.

Number of Pages Read Yesterday

0	5
1	0 2 2 2
2	6 7
3	
4	7 8
5	0 2 3

Key
2 | 7 represents 27 pages read

What is the median number of pages read?

A. 12

B. 26.5

C. 29.5

D. 48

10 At a restaurant there are 5 kinds of pasta and 2 types of sauce. How many different ways can a customer order one kind of pasta and one type of sauce?

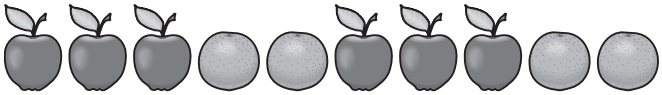
A. 5

B. 7

C. 10

D. 20

11 Look at these oranges and apples.



What is the ratio of oranges to apples?

12 The manager of a restaurant uses the formula below to decide what to charge for a meal.

$$p = (f \div 3) \times 10$$

In the formula, p is the price, in dollars, that customers pay for a meal and f is the food cost to make the meal.

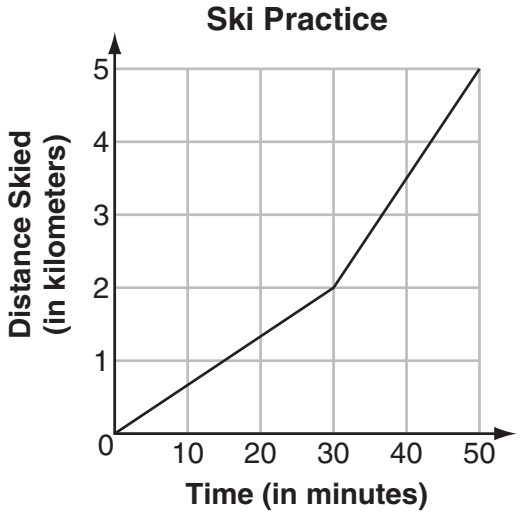
What is the price of a meal if the food cost is \$4.50?

13 What is the greatest whole number value of n that makes this sentence true?

$$3^n < 100$$

Show your work or explain how you know.

14 The graph below shows the distance Ben skied during a 50-minute practice.



How does Ben's speed during the last 20 minutes of the practice compare with his speed during the first 30 minutes? Explain your answer.

15 Cal said, "All squares are similar to each other."

a. Explain how you know whether Cal is or is not correct.

Stu said, "All rectangles are similar to each other."

b. Draw two rectangles that prove that Stu's statement is **false**. Explain your answer.

Grade 7 Mathematics Released Item Information

Released Item Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Calculator Allowed	✓			✓		✓	✓		✓	✓		✓		✓	
Content Strand[1]	NO	NO	NO	GM	GM	GM	FA	FA	DP	DP	NO	FA	NO	FA	GM
GLE Code	6-1	6-3	6-4	6-1	6-6	6-7	6-1	6-4	6-1	6-4	6-1	6-3	6-2	6-2	6-5
Depth of Knowledge Code	1	2	2	2	1	2	2	2	2	1	1	1	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	D	A	C	B	D	B	C					
Total Possible Points	1	1	1	1	1	1	1	1	1	1	1	1	2	2	4

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

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