



GRADE

6

Instructional Materials

FOR THE

CRITERION REFERENCED TEST

Nevada

Grade 6

MATHEMATICS

- 1** Students in a P.E. class run a 12-mile relay race. Each of the 32 students in the class runs the same distance. What distance does each student run?

A $\frac{3}{8}$ mile
 B $\frac{5}{11}$ mile
 C $\frac{3}{5}$ mile
 D $\frac{5}{8}$ mile

- 2** The table below shows the numbers of tablespoons in various numbers of cups. One number is missing in the table.

Tablespoons and Cups

Number of Tablespoons	Number of Cups
48	3
112	
144	9
224	14

What is the missing number in the table?

A 4
 B 6
 C 7
 D 8

- 3** Hassan uses $\frac{5}{6}$ carton of eggs to make omelets. Each omelet he makes uses $\frac{1}{4}$ carton of eggs. What is the total number of omelets Hassan can make?

A $\frac{5}{24}$ omelet
 B $\frac{3}{10}$ omelet
 C $3\frac{1}{3}$ omelets
 D $4\frac{4}{5}$ omelets

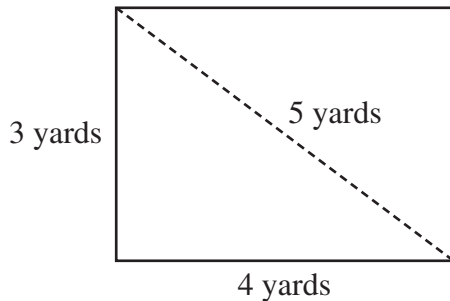
- 4** What is the product of 0.3165 and 1.12 ?

A 0.012660
 B 0.035448
 C 0.343370
 D 0.354480

- 5** Jenny vacuums her car every 4 weeks and waxes her car every 6 weeks. Jenny vacuumed and waxed her car this morning. What is the **fewest** number of weeks that will pass before Jenny vacuums and waxes her car on the same day again?

A 2 weeks
 B 10 weeks
 C 12 weeks
 D 24 weeks

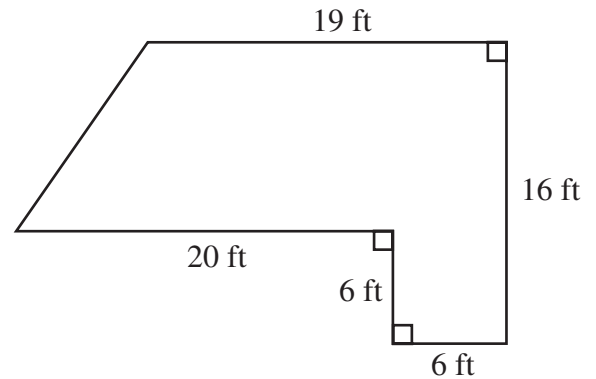
- 6** The rectangle shown below is divided into two triangles of equal size.



Which expression could be used to determine the area, in square yards, of the rectangle?

- A $\frac{1}{2}(3 \cdot 4) + \frac{1}{2}(3 \cdot 4)$
 B $\frac{1}{2}(3 \cdot 4) + \frac{1}{2}(3 \cdot 5)$
 C $\frac{1}{2}(3 \cdot 4)$
 D $\frac{1}{2}(3 \cdot 4 \cdot 5)$

- 7** The picture below shows the shape of a design painted on the side of a building. The design was formed by combining triangles and rectangles.



What is the area of the wall covered by the design?

- A 261 ft²
 B 296 ft²
 C 321 ft²
 D 424 ft²

- 8** The table below shows the number of donations received at a fundraiser.

Donations Received

Hour	1	2	3	4	5	6	7	8	9	10
Number of Donations	10	0	2	6	5	0	5	6	2	1

Which statement about the data shown in the table is true?

- A The data are clustered about hour 5 .
- B The data are symmetric about a gap.
- C There is a peak in the data at hour 10 .
- D There is more than one gap in the data.

- 9** Brian recorded the temperature outside his house at noon each day for the past nine days. His results are listed below.

15°C 16°C 16°C 19°C 20°C 23°C 24°C 24°C 25°C

What is the **interquartile range** of the temperatures Brian recorded?

- A 4°C
- B 5°C
- C 8°C
- D 10°C

- 10** The list below shows the number of free throws each of several basketball players on a team made at practice.

1 2 12 12 13 14

What is the **mean absolute deviation** of the number of free throws the players made?

- A 3 free throws
- B 4 free throws
- C 5 free throws
- D 9 free throws



Write your answer to Question 11 on a separate sheet of paper. Be sure to answer Parts A and B.

11

The ratio of the number of girls to the number of boys at Michael's school is 4:5 . There are 351 students at the school.

- A** How many students at Michael's school are girls? Show your work or explain your thinking.
- B** At Sally's school, 28% of the students are in 6th grade. There are 49 students in 6th grade. What is the total number of students at Sally's school? Show your work or explain your thinking.



Correct Answers for Multiple-Choice Items

Item Level Data

Item Number	Strand	DOK	P-value
1*	3	1	0.47
2	3	1	0.30
3*	1	1	0.30
4	1	1	0.39
5*	1	2	0.34
6	3	1	0.26
7*	3	2	0.17
8*	5	1	0.39
9	5	1	0.29
10	5	1	0.23

P-value is the proportion of students who got the item correct

*This is an item that was developed for these Instructional Materials, and it mirrors content assessed from an item field tested in the 2011-2012 test administration. The p-value and percentages reported here are based on the p-value and percentages of the item from the 2011-2012 field test.

Percentage of Students Selecting a Given Response

A	B	C	D
47% ✓	7%	30%	15%
9%	48%	30% ✓	12%
25%	21%	30% ✓	23%
13%	21%	27%	39% ✓
31%	20%	34% ✓	15%
26% ✓	26%	27%	21%
17% ✓	46%	26%	11%
15%	15%	30%	39% ✓
12%	14%	29% ✓	44%
11%	16%	23% ✓	50%

✓ = Correct Answer

Detailed objectives for Content Standards and Depth of Knowledge (DOK) descriptions can be found on the Nevada Department of Education web site.

Nevada 6 2011-12
Mathematics

Version 1 #50 I-Ref #:
Date: 1/24/12

WE: Y12_MA2900 Rpt Cat(s): NO NV MATCH
CCCS: 6.RP.3b

Correct Answers

Part A: 156 (students or girls)

$$4 + 5 = 9$$

$$351 \div 9 = 39$$

$$39 \times 4 = 156$$

or equivalent work

Sample explanation:

The ratio of the number of girls to the total number of students is 4 to 9. Divide the total number of students at the school (351) by 9 and then multiply by 4 to find out how many students are girls.

Part B: 175 (students)

$$0.28x = 49$$

$$x = \frac{49}{0.28}$$

$$x = 175$$

or equivalent work

Sample explanation:

28% of the school is equal to 49, so $0.28x = 49$. Divide both sides by 0.28. There are 175 students at Sally's school.