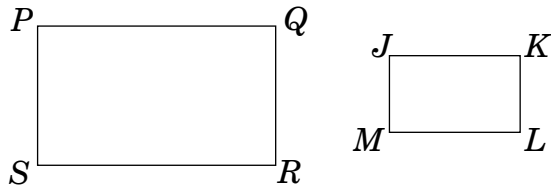


1. Figure  $PQRS \sim$  figure  $JKLM$



Which of the following completes this proportion  $\left(\frac{PS}{JM} = \frac{QR}{?}\right)$ ?

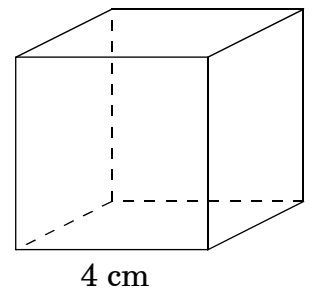
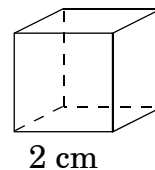
- A  $KL$   
 B  $LM$   
 C  $PQ$   
 D  $JK$
2. The manufacturer's price for a tent is \$28.50. A camping store that bought the tents sells them for \$40.76. **Approximately** what was the percent of increase in the price of the tents?

- A 43%  
 B 57%  
 C 75%  
 D 76%

3. A truck has traveled 75 miles in 1.5 hours of driving. At the same speed, which proportion can be used to determine how long,  $T$  (in hours), it would take the truck to travel 325 miles?

- A  $\frac{1.5}{325} = \frac{75}{T}$   
 B  $\frac{325}{1.5} = \frac{75}{T}$   
 C  $\frac{325}{75} = \frac{1.5}{T}$   
 D  $\frac{75}{325} = \frac{1.5}{T}$

4. What is the ratio of the volumes of these two cubes?



- A 1 to 2  
 B 1 to 4  
 C 1 to 8  
 D 1 to 16

5. A city's daily low temperatures in January fluctuated between  $-7^{\circ}\text{F}$  and  $2^{\circ}\text{F}$ . What was the temperature range?
- A  $2^{\circ}\text{F}$   
B  $5^{\circ}\text{F}$   
C  $7^{\circ}\text{F}$   
D  $9^{\circ}\text{F}$
6. One astronomical unit (AU) is the average distance from Earth to the sun. This distance is about  $1.5 \times 10^8$  kilometers. What is the equivalent distance in kilometers for 3 astronomical units?
- A  $4.5 \times 10^{22}$  km  
B  $1.5 \times 10^{22}$  km  
C  $4.5 \times 10^8$  km  
D  $4.5 \times 10^4$  km
7. According to the 1998 Census Bureau data, New York City was ranked number 1 in population with a population of approximately  $7.3 \times 10^6$  people. Los Angeles ranked number 2 with a population of slightly less than half that of New York City. Which of the following is the **approximate** population of Los Angeles?
- A 135,000  
B 3,500,000  
C 3,900,000  
D 14,700,000
8. A copying machine reduces a 12-inch line segment to 10.5 inches. At this setting, what would a 16-inch line segment become?
- A 12 inches  
B 14 inches  
C 16 inches  
D 18 inches

9. Mr. Jones purchased a CD player for \$97.19 including tax. The CD player had a sticker price of \$89.99. **About** what percent sales tax did he pay?
- A 6%
  - B 7%
  - C 8%
  - D 9%
10. A 6-ounce box of strawberry gelatin costs \$0.90 and a 3-ounce box costs \$0.42. What is the difference in cost per ounce between the larger and the smaller boxes?
- A \$0.48
  - B \$0.04
  - C \$0.03
  - D \$0.01

### End of Goal 1 Sample Items

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## Answers to EOG Grade 7 Math Sample Items

### Goal 1

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- 1. Objective 1.01**  
Develop and use ratios, proportions, and percents to solve problems.  
**Thinking Skill:** Applying                      **Correct Answer:** A
- 2. Objective 1.01**  
Develop and use ratios, proportions, and percents to solve problems.  
**Thinking Skill:** Applying                      **Correct Answer:** A
- 3. Objective 1.01**  
Develop and use ratios, proportions, and percents to solve problems.  
**Thinking Skill:** Analyzing                      **Correct Answer:** D
- 4. Objective 1.01**  
Develop and use ratios, proportions, and percents to solve problems.  
**Thinking Skill:** Applying                      **Correct Answer:** C
- 5. Objective 1.02**  
Develop fluency in addition, subtraction, multiplication, and division of rational numbers; Analyze computational strategies.  
**Thinking Skill:** Analyzing                      **Correct Answer:** D
- 6. Objective 1.02**  
Develop fluency in addition, subtraction, multiplication, and division of rational numbers; Analyze computational strategies.  
**Thinking Skill:** Applying                      **Correct Answer:** C
- 7. Objective 1.02**  
Develop fluency in addition, subtraction, multiplication, and division of rational numbers; Analyze computational strategies.  
**Thinking Skill:** Generating                      **Correct Answer:** B
- 8. Objective 1.03**  
Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.  
**Thinking Skill:** Applying                      **Correct Answer:** B
- 9. Objective 1.03**  
Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.  
**Thinking Skill:** Applying                      **Correct Answer:** C

**10. Objective 1.03**

Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.

**Thinking Skill:** Applying

**Correct Answer:** D