

6. A: Yes, B: Yes, C: No, D: No, E: Yes

7.  $3\frac{1}{3}\%$

8. \$28.80;

Sample response:

$$\$72 \div 3 = \$24$$

$$\frac{20}{100} = \frac{x}{24}$$

$$480 = 100x$$

$$4.80 = x$$

$$24.00 + 4.80 = 28.80$$

9. She saved \$4.20 more on the suit, because she saved \$15 on the sweater and \$19.20 on the suit.

10. Only the population of Tykestown decreased by a percentage greater than 25%.

Sample response: Only Cedarville, Tykestown, and Arkington had percent decreases.

$$\text{For Cedarville, the percent of decrease is } \frac{62.7 - 48.9}{62.7} \approx 0.22 \approx 22\%.$$

$$\text{For Tykestown, the percent of decrease is } \frac{44.2 - 31.8}{44.2} \approx 0.28 \approx 28\%.$$

$$\text{For Arkington, the percent of decrease is } \frac{56.6 - 44.2}{56.6} \approx 0.22 \approx 22\%.$$

### DOMAIN 1 REVIEW

1. Nina, Regina, Caleb, Yoshi 7.RP.1

2. **MP4**  $m = 28g$ ; 15 gallons;

Sample response: Find the constant of

proportionality:  $\frac{112 \text{ miles}}{4 \text{ gallons}} = 28 \text{ miles per gallon}$

and  $\frac{182 \text{ miles}}{6.5 \text{ gallons}} = 28 \text{ miles per gallon}$ . The equation is  $m = 28g$ .

I substituted 420 for  $m$  and solved for  $g$ :

$$420 = 28g$$

$$\frac{420}{28} = g$$

15 gallons =  $g$  7.RP.2.c

3. A: Yes, B: Yes, C: No, D: No, E: Yes 7.RP.2.a

4. **Markup Less than 25%:** CD, Speakers, Rocking Chair;  
**Markup Greater than 25%:** Bracelet, Greeting Card, Soccer Ball 7.RP.3

5. **MP1** A:  $\frac{2}{5}$  acre per hour, B:  $\frac{3}{5}$  acre per hour,  
C:  $\frac{1}{2}$  acre per hour 7.RP.1

6. proportional; \$836 7.RP.2.a

7. **MP1** **MP6** Sample response:

Yes, the graph shows a proportional relationship.

I know this because the graph is a straight line that passes through (0, 0). The constant of proportionality is 7, and it represents Tracy's hourly rate, \$7 per hour.

7.RP.2.d

8. A: False, B: True, C: True 7.RP.3

9. A:  $t = 25n$ , B:  $t = 15n$ , C:  $t = 20n$  7.RP.2.c

10. 162 revolutions per minute;

Sample response:

$$\frac{\frac{9}{10} \text{ revolution}}{\frac{1}{3} \text{ sec}}$$

$$\frac{\frac{9}{10}}{\frac{1}{3}} = \frac{9}{10} \cdot \frac{3}{1} = \frac{27}{10} = 2.7 \text{ revolutions per second}$$

$$\frac{2.7 \text{ revolutions}}{1 \text{ sec}} \cdot \frac{60 \text{ sec}}{1 \text{ min}} = \frac{162 \text{ sec}}{1 \text{ min}} \quad 7.RP.1$$

11. **MP1** Part A 45.05

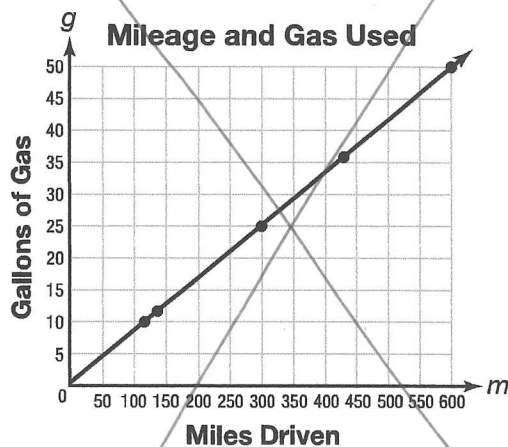
Part B 10.50

Part C 11.11 7.RP.3

12. **MP4** **MP6** (1, 40); 120 words, 3 minutes 7.RP.2.d

### Performance Task

Part A



Student responses should include that the relationship is proportional because the points form a line that passes through the origin and the ratio  $\frac{g}{m}$  is equivalent to  $\frac{1}{12}$  for every data pair. 7.RP.2.a, 7.RP.2.b, 7.RP.2.d, MP4, MP5