Lesson 65 • Applications Using Similar Triangles

Power Up

– ***Facts***

– ***Mental Math***

– ***Problem Solving***

New Concepts

– ***Examples***

– ***Practice Set***

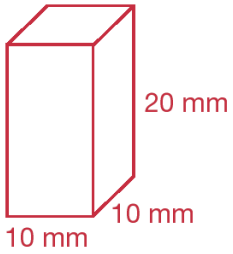
Written Practice

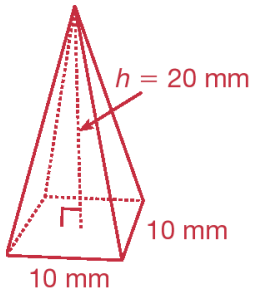
Facts Express each percent as a reduced fraction.

$1\% = \frac{1}{100}$	$100\% = 1$	$50\% = \frac{1}{2}$	$70\% = \frac{7}{10}$	$20\% = \frac{1}{5}$
$150\% = 1\frac{1}{2}$	$66\frac{2}{3}\% = \frac{2}{3}$	$5\% = \frac{1}{20}$	$12\frac{1}{2}\% = \frac{1}{8}$	$90\% = \frac{9}{10}$
$25\% = \frac{1}{4}$	$2\% = \frac{1}{50}$	$10\% = \frac{1}{10}$	$33\frac{1}{3}\% = \frac{1}{3}$	$4\% = \frac{1}{25}$
$40\% = \frac{2}{5}$	$16\frac{2}{3}\% = \frac{1}{6}$	$75\% = \frac{3}{4}$	$30\% = \frac{3}{10}$	$80\% = \frac{4}{5}$

Written Practice

1. 60 cans of chili
2. 12 people
3. 50 minutes
4. mean 6.99, median 6.98, mode 6.98
5. 60°
6. a.





b. 1000 m^2

c. The prism; the pyramid could fit inside the prism and still have space around it.

Written Practice *continued*

7. no

8. a. {1 and 2, 1 and 3, 2 and 3}

b. $\frac{2}{3}$

9. 25 ft

10. 28.56 cm

11. $\frac{90 \text{ m}}{\text{min}} \cdot \frac{1 \text{ min}}{60 \text{ sec}} = 1.5 \text{ m/sec}$

12. $\frac{1.2 \text{ ft}}{\text{sec}} \cdot \frac{12 \text{ in.}}{1 \text{ ft}} = 14.4 \text{ in./sec}$

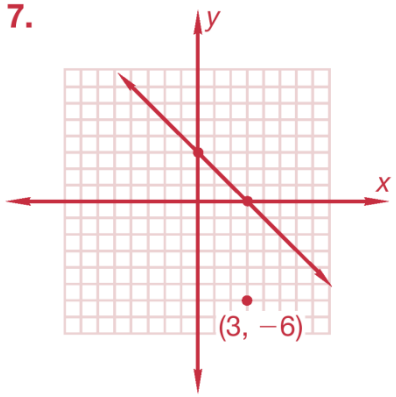
13. a. $4(y - 8)$

b. $2x(x - 8)$

14. a. $\frac{1}{30}, 0.0\overline{3}$

b. fraction

7.



15. $0.4375; 43\frac{3}{4}\%$

16. 60%

17. 0

18. $\frac{x^2}{z^2}$

19. $\frac{5}{12}$

20. 12

Written Practice

continued

21. $x = 14$

22. $\frac{3}{7}$

23.

24.

25. No, the relationship is not proportional. It takes more gas (is less fuel efficient) to travel at low speeds with stopping and starting (city driving) than it does to travel continuously at highway speeds.