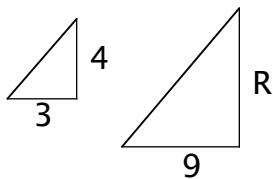Solve for the unknown.

1. $\dfrac{1}{3} = \dfrac{25}{Y}$

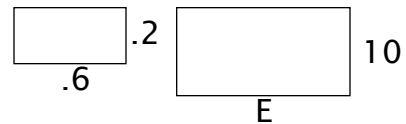2. $\dfrac{14}{32} = \dfrac{A}{16}$

3. $\dfrac{7}{G} = \dfrac{7}{8}$

Write a proportion for each set of similar polygons and solve for the unknown side.

4.

5.

Find the LCM for each pair of numbers.

6. 4 and 5

7. 15 and 20

8. 12 and 32

Find the GCF for each pair of numbers.

9. 11 and 22

10. 16 and 18

11. 10 and 25

12. A room is 15 feet long, 13 feet wide, and 10 feet high. How many square feet must be covered if the walls, ceiling, and floor are all to be painted the same color?

13. What is the surface area of a pyramid with a square base measuring 10 feet on a side, if the height of each face is five feet?

14. The temperature in Nigel's back yard is 30° Celsius. Give the temperature in Fahrenheit and tell if it is more likely to be winter or summer.

15. The weather report gave the temperature as 41° Fahrenheit. What is the Celsius temperature?

16. Simplify and write without the absolute value signs: $\left| 2 - 4^2 \right| + \left| 5 \right| =$

Add or subtract.

17.   8.5
    + 2.0

18.   5.28
    − 3.04

19.   4.
    + 2.69

20.   6.0
    − 1.7

Multiply.

21.   5.9
    ×   .4

22.   .006
    × .36

23.   7.8
    × 3.1

Divide.

24. $7 \overline{\smash{\big)}\ 2.8}$

25. $.05 \overline{\smash{\big)}\ 75}$

26. $.03 \overline{\smash{\big)}\ .06}$

Write each fraction as a decimal and as a percent. Divide decimals to the hundredths place and write any remainders as fractions.

27. $\dfrac{4}{5} =$ $=$

28. $\dfrac{1}{3} =$ $=$

29. $\dfrac{16}{100} =$ $=$

30. Kate plans to save 5% of her income. If she just earned $80, how much should she save?