



## SKILL 12: Finding a Percent of a Number

To find a percent of a number, you can use a proportion, or you can write the percent as a decimal and multiply.

### Example

**Find 22% of 83.**

#### *Proportion Method*

Write a proportion. Then find the cross products and solve for  $x$ .

$$\begin{array}{l} \text{part} \quad \rightarrow \quad \frac{x}{83} = \frac{22}{100} \quad \leftarrow \text{Write the} \\ \text{whole} \quad \rightarrow \quad \frac{x}{83} = \frac{22}{100} \quad \text{percent as} \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{a fraction} \\ \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \quad \text{over 100.} \end{array}$$

$$100x = 1826$$

$$x = 1826 \div 100$$

$$x = 18.26$$

$$22\% \text{ of } 83 \text{ is } 18.26.$$

#### *Equation Method*

Change the percent to a decimal and multiply.

$$\begin{aligned} 22\% \text{ of } 83 &= 0.22 \times 83 \\ &= 18.26 \end{aligned}$$

$$22\% \text{ of } 83 \text{ is } 18.26.$$

### Guided Practice

**Find 6% of 30 using the indicated method.**

1. Write a proportion.

$$\frac{x}{30} = \frac{6}{100}$$

$$100x = \underline{\hspace{2cm}}$$

$$x = \underline{\hspace{2cm}}$$

$$6\% \text{ of } 30 = \underline{\hspace{2cm}}$$

2. Write an equation.

$$6\% \text{ of } 30 = \underline{\hspace{1cm}} \times 30$$

$$= \underline{\hspace{2cm}}$$

$$6\% \text{ of } 30 = \underline{\hspace{2cm}}$$

**Find the percent of each number.**

3. 25% of 84

$$0.25 \times 84 = \underline{\hspace{2cm}}$$

$$25\% \text{ of } 84 = \underline{\hspace{2cm}}$$

4. 10% of 7

$$0.1 \times 7 = \underline{\hspace{2cm}}$$

$$10\% \text{ of } 7 = \underline{\hspace{2cm}}$$

5. 91% of 37

$$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$$

$$91\% \text{ of } 37 = \underline{\hspace{2cm}}$$

6. 60% of 45

$$0.6 \times 45 = \underline{\hspace{2cm}}$$

$$60\% \text{ of } 45 = \underline{\hspace{2cm}}$$

7. 4.2% of 50

$$0.042 \times 50 = \underline{\hspace{2cm}}$$

$$4.2\% \text{ of } 50 = \underline{\hspace{2cm}}$$

8. 75% of 160

$$\underline{\hspace{1cm}} \times 160 = \underline{\hspace{2cm}}$$

$$75\% \text{ of } 160 = \underline{\hspace{2cm}}$$

**SKILL 12: Practice**

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**Find the percent of each number.**

1. 50% of 66 = \_\_\_\_\_
2. 25% of 72 = \_\_\_\_\_
3. 40% of 180 = \_\_\_\_\_
4.  $33\frac{1}{3}\%$  of 123 = \_\_\_\_\_
5. 54% of 120 = \_\_\_\_\_
6. 0% of 14 = \_\_\_\_\_
7. 22% of 96 = \_\_\_\_\_
8. 4% of 180 = \_\_\_\_\_
9. 100% of 180 = \_\_\_\_\_
10. 19.2% of 50 = \_\_\_\_\_
11. 31.4% of 20 = \_\_\_\_\_
12. 8.8% of 700 = \_\_\_\_\_
13. 3.8% of 145 = \_\_\_\_\_
14. 98.5% of 150 = \_\_\_\_\_
15. 45% of 75 = \_\_\_\_\_
16. 1.2% of 200 = \_\_\_\_\_
17. 75% of 360 = \_\_\_\_\_
18.  $20\frac{2}{3}$  of 65 = \_\_\_\_\_

**Solve each problem. Try to find a pattern.**

19. 10% of 37 = \_\_\_\_\_  
37% of 10 = \_\_\_\_\_
20. 78% of 50 = \_\_\_\_\_  
50% of 78 = \_\_\_\_\_
21. 28% of 25 = \_\_\_\_\_  
25% of 28 = \_\_\_\_\_
22. 47% of 40 = \_\_\_\_\_  
40% of 47 = \_\_\_\_\_

**Solve.**

23. Of the 50 students in Class A, 48% are boys.  
How many of the students are boys? \_\_\_\_\_
24. The basketball team won 68% of the 25 games  
played. How many games did the team win? \_\_\_\_\_



25. Find 25% of 120.

- A 300                      C 480  
B 3                            D 30

Skill 12

26. Which is the cross product

of  $\frac{4}{12} = \frac{6}{18}$ ?

- F 24                      H 216  
G 42                      J 72

Skill 5