



Name _____ Date _____

The Percent Equation (Pages 339–341)

Another way to find a percent is to express the percent as a decimal and multiply.

Finding a Percent with the Percent Equation	The rate (R) times the base (B) is equal to the percentage (P). $RB = P$ Express R as a decimal when you solve this equation.
----------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------

EXAMPLES

A 15% of what number is 3?

$$RB = P \quad \text{Use the percent equation.}$$

$$0.15 \times B = 3 \quad R = 0.15, P = 3$$

$$\frac{0.15B}{0.15} = \frac{3}{0.15} \quad \text{Divide each side by 0.15.}$$

$$B = 20 \quad \text{Simplify.}$$

15% of 20 is 3.

B 45 is what percent of 120?

$$RB = P \quad \text{Use the percent equation.}$$

$$R \times 120 = 45 \quad B = 120, P = 45$$

$$\frac{120R}{120} = \frac{45}{120} \quad \text{Divide each side by 120.}$$

$$R = 0.375 \quad \text{Simplify.}$$

$$R = 37.5\% \quad \text{Write the decimal as a \% .}$$

45 is 37.5% of 120.

Try These Together

1. Find 15.5% of 90 using the percent equation.

HINT: 90 is B and R is 0.155.

2. Find 33% of 77 using the percent equation.

HINT: The number following “of” is usually B .

PRACTICE

Write an equation in the form $RB = P$ for each problem. Then solve.

- 12% of what number is 120?
- 42% of what number is 21?
- Find 82% of 30.
- 24 is what percent of 96?
- Find 40% of 37.
- 13 is what percent of 104?
- 61 is 50% of what number?
- Find 75% of 98.
- 6 is 3% of what number?
- 24 is 20% of what number?
- 3.6 is what percent of 72?
- Find 18% of 54.
- Find 65% of 123.
- Find 12% of \$1.75.
- 72 is what percent of 80?
- \$8.22 is 15% of what amount?
- Sports** Brian had 18 hits in 78 times at bat during the last baseball season. What percent of his times at bat were hits?



20. Standardized Test Practice What is 35% of 120?

A 42

B 38

C 34

D 30

Answers: 1. 13.95 2. 25.41 3–18. See Answer Key for equations. 3. 1,000 4. 50 5. 24.6 6. 25% 7. 14.8 8. 12.5% 9. 122 10. 73.5 11. 200 12. 120 13. 5% 14. 9.72 15. 79.95 16. \$0.21 17. 90% 18. B 8.22 \$54.80 19. about 23% 20. A