

LESSON
1-11

Review for Mastery

Solving Equations by Multiplying or Dividing

When you solve an equation, you must get the variable by itself.
Remember, what you do to one side of an equation, you must do to the other side.

- To solve a division equation, multiply both sides of the equation by the same number.

Solve and check: $\frac{a}{3} = 4$.

$\frac{3a}{3} = 1a = a$

$\frac{a}{3} = 4$
 $(3)\frac{a}{3} = 4(3)$
 $a = 12$

Multiply to solve a division equation.

Replace the variable with the solution.

Check: $\frac{a}{3} = 4$
 $\frac{12}{3} \stackrel{?}{=} 4$
 $4 \stackrel{?}{=} 4$ ✓

A true sentence means the solution is correct.

Solve and check.

1. $\frac{x}{6} = 3$

2. $\frac{s}{8} = 8$

3. $\frac{c}{10} = 7$

4. $\frac{n}{3} = 12$

- To solve a multiplication equation, divide both sides of the equation by the same number.

Solve and check: $5k = 30$.

$\frac{5k}{5} = 1k = k$

$5k = 30$
 $\frac{5k}{5} = \frac{30}{5}$
 $k = 6$

Divide to solve a multiplication equation.

Replace the variable with the solution.

Check: $5k = 30$
 $5(6) \stackrel{?}{=} 30$
 $30 \stackrel{?}{=} 30$ ✓

True

Solve and check.

5. $2w = 16$

6. $4b = 24$

7. $9z = 45$

8. $10m = 40$

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Practice B***Solving Equations by Multiplying or Dividing***

Solve each equation. Check your answer.

1. $68 = \frac{r}{4}$

2. $k \div 24 = 85$

3. $255 = \frac{x}{4}$

4. $42 = w \div 18$

5. $\frac{a}{15} = 22$

6. $82 = b \div 5$

7. $\frac{c}{7} = 9$

8. $28 = z \div 3$

9. $\frac{y}{12} = 10$

Solve each equation. Check your answer.

10. $52w = 364$

11. $41x = 492$

12. $410 = 82p$

13. $35d = 735$

14. $195 = 65h$

15. $4k = 140$

16. $110 = 5e$

17. $27a = 216$

18. $96 = 12n$

19. Ashley earns \$5.50 per hour babysitting. She wants to buy a CD player that costs \$71.50, including tax. How many hours will she need to work to earn the money for the CD player?
- _____

20. A cat can jump the height of up to 5 times the length of its tail. How high can a cat jump if its tail is 13 inches long?
- _____