

SOLVING EQUATIONS USING MULTIPLICATION AND DIVISION

REMEMBER: You may multiply or divide both sides of an equation by the same number.

EXAMPLES $5x = 25$ Divide by 5.

$$x = 5$$

$4y = 10$ Divide by 4.

$$y = \frac{10}{4}$$

$$= 2\frac{2}{4} \quad \text{Mixed Number}$$

$$= 2\frac{1}{2} \quad \text{Simplify}$$

Solve each equation.

1. $2a = 8$

2. $7b = 35$

3. $9c = 27$

4. $6x = 24$

5. $2y = 5$

6. $2z = 9$

7. $10b = 25$

8. $4c = 20$

9. $8a = 20$

10. $3x = 14$

11. $5y = 21$

12. $6x = 16$

13. $4a = 14$

14. $7b = 15$

15. $5c = 12$

16. $9x = 26$

17. $7x = 44$

18. $6z = 47$

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REMEMBER:

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

EXAMPLES

$\frac{y}{3} = 5$ Multiply by 3.

$$3\left(\frac{y}{3}\right) = 3(5)$$
$$y = 15$$

$\frac{a}{2} = 2\frac{1}{2}$ Multiply by 2.

$$2\left(\frac{a}{2}\right) = 2\left(2\frac{1}{2}\right)$$
$$a = 5$$

Solve each equation.

1. $\frac{x}{2} = 3$

2. $\frac{y}{3} = 4$

3. $\frac{z}{5} = 3$

4. $\frac{a}{3} = 5$

5. $\frac{b}{6} = 3$

6. $\frac{c}{7} = 4$

7. $\frac{x}{2} = 1\frac{1}{2}$

8. $\frac{y}{3} = 1\frac{1}{3}$

9. $2x = 5$

10. $\frac{a}{5} = 10$

11. $3b = 15$

12. $\frac{c}{6} = 2\frac{1}{2}$

13. $\frac{x}{2} = 13$

14. $\frac{y}{4} = 2\frac{1}{2}$

15. $7x = 49$