Properties of Equality

GRE=Golden Rule of Equations
"Whatever you do to one side you
have to do to the other."

Both Sides of an Equation

Solve the equation for x. $3x = 15$

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$\frac{3x}{3} = \frac{15}{3}$ Divide by 3 so x stands alone.

$x = 5$ Remember to divide both sides of the equation by 3.

Choose the correct solution for each equation.

1. $x + 2 = 8$
   a. 2   **b.** 6   **c.** 8   _____

2. $y - 3 = 2$
   a. 5   **b.** 3   **c.** 2   _____

3. $4 + z = 7$
   a. 11   **b.** 8   **c.** 3   _____

Choose the first step to solve each equation.

4. $8n = 16$
   a. $\frac{8n}{8} = 16$ **b.** $\frac{8n}{8} = \frac{16}{8}$ **c.** $8n = \frac{16}{8}$ _____

5. $2n + 1 = 5$
   a. $\frac{2n}{2} + 1 = \frac{5}{2}$ **b.** $\frac{2n}{2} + 1 - 1 = \frac{5}{2}$ **c.** $2n + 1 - 1 = 5 - 1$ _____

6. $\frac{n}{3} + 5 = 9$
   a. $\frac{n}{3} - 5 = 9 - 5$ **b.** $\frac{n}{3} + 5 \times 3 = 9 \times 3$ **c.** $\frac{n}{3} + 5 - 5 = 9 - 5$ _____

7. $\frac{n}{5} = 8$
   a. $\frac{n}{5} \times 5 = 8 \times 5$ **b.** $\frac{n}{5} \times 5 = 8$ **c.** $\frac{n}{5} = 8 \times 5$ _____

Solve:

8. $7a = 56$ _____

9. $12 + c = 20$ _____

10. $6x - 2x + 14 - 3 = x + 22$