

Target Skill: Solve the 4 types of 1 step equations and name the step.

Prerequisite skills:

Additive Inverses	Addition/Subtraction	Multiplication (with Fractions)
Given a real number “a” there is always another number “-a” that is its opposite such that: $a + (-a) = 0$ 3 and _____, -8 and _____, -5.2 and _____	$\begin{array}{r} -17 \\ +12 \\ \hline \end{array}$ $\begin{array}{r} 23 \\ -28 \\ \hline \end{array}$ $\begin{array}{r} \frac{2}{3} \\ +\frac{3}{5} \\ \hline \end{array}$ $\begin{array}{r} \frac{-5}{8} \\ +\frac{3}{4} \\ \hline \end{array}$	$\frac{2}{3} \cdot \frac{4}{5} =$ $2 \cdot \frac{3}{8} =$ $6 \cdot \frac{1}{6} =$ $\frac{3}{5} \cdot \frac{5}{3} =$

Objective: Solve equations by getting the variable alone.

Rules of the math game: - You can add or subtract the same number from BOTH SIDES. (Addition/Subtraction Property of Equality) - You can multiply or divide both SIDES by the same number (Multiplication/Division Property of Equality) - You can exchange the left side and the right side for each other (Symmetric Property)	Tools of the Game: • Additive inverses: $\begin{array}{c} a \\ -a \end{array}$ or $\begin{array}{c} -a \\ +a \end{array}$ • Multiplicative Inverses/Reciprocals: $\frac{5}{1} \cdot \frac{1}{5} =$ $\frac{2}{3} \cdot \frac{3}{2} =$
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Directions: Determine the value of x that makes the equation true. STATE the RULE(s) used. Answer all as $x = \text{answer}$

1. $x - 3 = 5$ $x = \underline{\hspace{2cm}}$ Property Used:	2. $-2 = x - 8$ $x = \underline{\hspace{2cm}}$ Property Used:	3. $x - \frac{5}{3} = \frac{7}{6}$ $x = \underline{\hspace{2cm}}$ Property Used:
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INVERSE OPERATIONS: Add and Subtract are called INVERSE OPERATIONS. They “UNDO” each other.**The inverse of ADD 3 is SUBTRACT 3 or the inverse of SUBTRACT 3 is ADD 3.**

U1A L1 Solving 1 Step Equations

4. $x + 4 = 9$

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

Property Used:

5. $-1 = 6 + x$

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

Property Used:

6. $x + \frac{2}{5} = \frac{9}{10}$

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

Property Used:

The next problems, the operations done to x have changed to Multiplication and division this can be confusion sometimes to determine if you should think of it as a multiplication done to x or a division.

• In the equation: $\frac{x}{5} = 2$ what does the equation show is being done to x ?

• In the equation: $5x = 2$ what does the equation show is being done to x ?

• In the equation: $\frac{5x}{3} = 2$ what does the equation show is being done to x ?

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

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

Property Used:

8. $-5 = \frac{x}{-2}$

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

Property Used:

9. $\frac{x}{7} = \frac{5}{2}$

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

Property Used:

10. $5x = 20$

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

Property Used:

11. $6 = -2x$

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

Property Used:

12. $\frac{2}{3}x = 5$

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

Property Used: