Name _____ Date _____

Equations with Fractions

Example

$\frac{x}{2} + \frac{x}{3} = 5 \mid \times 6$

$3x + 2x = 30$

$5x = 30$

$x = 6$

Remember

Multiply both sides by the **lowest common denominator**, and multiply **every** term, including terms without a denominator. Put a numerator with several terms in brackets: $6 \times \frac{x-1}{2} = 3(x-1)$.

1 ON YOUR OWN Solve.

$\frac{x}{3} = 4 \rightarrow x =$ ☐

$\frac{x}{2} - 1 = \frac{x}{5} + 2 \rightarrow x =$ ☐

$\frac{2x}{3} + \frac{1}{2} = \frac{x}{6} + 3 \rightarrow x =$ ☐

$\frac{x+1}{4} = \frac{x-1}{2} \rightarrow x =$ ☐

2 IN PAIRS **Find the mistake** and solve correctly.

$\frac{x-3}{2} + \frac{x}{4} = 3 \mid \times 4 \rightarrow 2x - 3 + x = 12$ **true** / **false**

Correction: _____

$\frac{x}{3} + 1 = 2 \mid \times 3 \rightarrow x + 1 = 6$ **true** / **false**

Correction: _____

Names (pair) _____ Date _____

3 ON YOUR OWN Solve.

$\frac{3x-1}{5} - \frac{x+2}{3} = 1 \rightarrow x =$ ☐ $\frac{x}{2} - \frac{x-4}{6} = 2 \rightarrow x =$ ☐

4 ON YOUR OWN Decimals: multiply by 10.

$0.2x + 1.5 = 0.5x - 0.3 \rightarrow x =$ ☐

5 IN PAIRS **A puzzle.** A third of a number increased by 4 equals half of the number. What is the number?

Equation: ☐ $x =$ ☐

6 IN PAIRS Make up an equation with fractions whose solution is $x = 2$. Swap with another pair and solve.

★ ON YOUR OWN **Exit card.** $\frac{x+2}{3} = \frac{x}{2} \rightarrow x =$ ☐