Solving Equations Involving Fractions

Remember to solve equations our goal is to _____

To do this we use _____ to all numbers connected to that variable.

Example

Solve each equation.

$\frac{1}{3}x = \frac{1}{5}$ $\frac{2}{3}x = \frac{5}{9}$ $1\frac{1}{5}x = \frac{3}{5}$

$4x = \frac{2}{3}$ $2\frac{1}{4} = 12x$

$3\frac{1}{8}x = 5\frac{5}{6}$

Solving Equations Involving Fractions

Remember to solve equations our goal is to get the variable by itself

To do this we use inverse operation to all numbers connected to that variable.

Example

Solve each equation.

$\frac{1}{3}x = \frac{1}{5} \div \frac{1}{3}$

$\div \frac{1}{3}$ | $\frac{1}{5} \cdot \frac{3}{1}$

$x = \frac{3}{5}$

$\frac{2}{3}x = \frac{5}{9} \div \frac{2}{3}$

$\div \frac{2}{3}$ | $\frac{5}{9} \cdot \frac{3}{2}$

$x = \frac{5}{6}$

$1\frac{1}{5}x = \frac{3}{5} \div 1\frac{1}{5}$

$\div 1\frac{1}{5}$ | $\frac{3}{5} \div \frac{6}{5}$

$\frac{1}{3}\!\!\cancel{5} \cdot \frac{5}{\cancel{6}_2}$

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

$4x = \frac{2}{3} \div 4$

$\div 4$ | $\frac{\cancel{2}^1}{3} \cdot \frac{1}{\cancel{4}_2}$

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

$2\frac{1}{4} = 12x$

$2\frac{1}{4} \div \frac{12}{1}$ | $\div 12$

$3\frac{\cancel{9}}{4} \cdot \frac{1}{\cancel{12}_4}$

$\frac{3}{16} = x$

$3\frac{1}{8}x = 5\frac{5}{6} \div 3\frac{1}{8}$

$\div 3\frac{1}{8}$ | $\frac{35}{6} \div \frac{25}{8}$

$\frac{\cancel{35}^7}{3\cancel{6}} \cdot \frac{\cancel{8}^4}{\cancel{25}_5}$

$x = \frac{28}{15} = 1\frac{13}{15}$