

Objectives: I can solve one step equations with fractional coefficients and solutions.

FRACTIONAL COEFFICIENTS AND SOLUTIONS

Sometimes you will have a fractional coefficient. (A coefficient is the number multiplied by the variable.) Sometimes your answers will be a fraction as well. Leave your answers as fractions.

Examples...

1. $\frac{2}{5}x = 20$

$$\frac{\cancel{5}}{\cancel{2}} \cdot \frac{\cancel{2}}{\cancel{5}} x = 20 \cdot \frac{5}{2}$$

$$\frac{5}{2} \cdot \frac{2}{5} x = \frac{10}{1} \cdot \frac{5}{2} = \frac{50}{1}$$

$x = 50$

What can you multiply $\frac{2}{5}$ by that will equal 1?

Instead of dividing by the coefficient...multiply by the reciprocal.

Cross-cancel if possible.

2. $5x = 52$

$$\frac{5x}{5} = \frac{52}{5}$$

$$x = \frac{52}{5} = 10\frac{2}{5}$$

Divide both sides by 5.

Reduce if possible. Improper fractions do NOT HAVE to be changed to mixed numbers.

Practice.

<p>a. $\frac{2}{3}p = -5$</p> $p = -\frac{5}{2} \text{ or } -2\frac{1}{2}$	<p>b. $-46 = 4y$</p> $y = -\frac{23}{2} \text{ or } -11\frac{1}{2}$	<p>c. $\frac{5}{8}d = 30$</p> $d = 48$
<p>d. $-65 = 20t$</p> $t = -\frac{13}{4} \text{ or } -3\frac{1}{4}$	<p>e. $-\frac{10}{9}k = \frac{5}{3}$</p> $k = \frac{50}{3} \text{ or } 16\frac{2}{3}$	<p>f. $-\frac{2}{5}y = -\frac{11}{2}$</p> $y = \frac{33}{2} \text{ or } 16\frac{1}{2}$
<p>g. $8 + d = 13$</p> $d = 5$	<p>h. $e + 4 = -32$</p> $e = -36$	<p>i. $\frac{3}{12}f = 44$</p> $f = 176$