

1/13/19

C3 5.1.2

can multiply equations by common integers to eliminate fractions.

Goal: eliminate fractions to multiply/divide with whole numbers

Fraction Busters

EX

$$\frac{4x}{3} + \frac{3x}{2} = \frac{17}{6}$$

① To get rid of the denominators, multiply by a common multiple.

$$\frac{12 \cdot 4x}{1 \cdot 3} + \frac{12 \cdot 3x}{2} = \frac{12 \cdot 17}{6}$$

② Multiply all terms (numerators).

$$\frac{48x}{3} + \frac{36x}{2} = \frac{204}{6}$$

③ Simplify all fractions

$$16x + 18x = 34$$

④ solve.

$$\frac{34x}{34} = \frac{34}{34}$$

$$x = 1$$

$$\frac{4x}{3} + \frac{3x}{2} = \frac{17}{6}$$

$$\frac{4 \cdot 1}{3} + \frac{3 \cdot 1}{2} = \frac{17}{6}$$

$$\left(\frac{2}{2}\right) \frac{4}{3} + \left(\frac{3}{3}\right) \frac{3}{2} = \frac{17}{6}$$

$$\frac{8}{6} + \frac{9}{6} = \frac{17}{6}$$

$$\frac{17}{6} = \frac{17}{6}$$

5-13

5-18

$$\textcircled{c} \frac{2x-3}{2} = \frac{2x}{3} + \frac{1}{2}$$

$$2x-3 = \frac{12x}{3} + \frac{6}{2}$$

$$\begin{array}{r} \textcircled{2x} - 3 \\ - \textcircled{2x} \end{array} = 4x + 3$$

$$\begin{array}{r} -3 \\ -3 \end{array} = \begin{array}{r} 2x + 3 \\ -3 \end{array}$$

$$\begin{array}{r} -6 \\ 2 \end{array} = \begin{array}{r} 2x \\ 2 \end{array}$$

$$\boxed{-3 \neq x}$$