

11

Fraction Busters

10/3

Review

$$\frac{3}{1} \cdot \left(\frac{x}{3}\right) = (15) \cdot 3$$

$$\frac{\cancel{3}x}{\cancel{3}} = 45$$

$$x = 45$$

$$\frac{-\cancel{3}x}{-\cancel{3}} = \frac{15}{-3}$$

$$x = -5$$

Fraction Busters

Multiply both sides of the equation
 every term by the LCM of denominators.
 Each denominator will then divide into the
 LCM and the result for each term will
 multiply by the numerator. We will then
 have an equation without fractions.



ex. $\frac{12}{1} \cdot \left(\frac{x}{4} + \frac{5}{6}\right) = (2) \cdot 12$ LCD of 4 and 6 = 12

$$\frac{12x}{4} + \frac{60}{6} = 24$$

$$\downarrow \quad \downarrow$$

$$3x + \cancel{10} = 24$$

$$\hline$$

$$\frac{\cancel{3}x}{\cancel{3}} = \frac{14}{3}$$

$$x = \frac{14}{3} \text{ or } 4\frac{2}{3}$$

Practice

(a)

$$8 \cdot \left(\frac{x}{4} + \frac{x}{2} \right) = \left(\frac{1}{8} \right) \cdot 8$$

LCD: 8

$$\frac{8x}{4} + \frac{8x}{2} = \frac{8}{8}$$

$$2x + 4x = 1$$

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

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

(b)

$$5 \left(\frac{x-4}{5} \right) = (10) \cdot 5$$

LCD: 5

$$\frac{5(x-4)}{5} = 50$$

$$x-4 = 50$$

$$+4 \quad +4$$

$$x = 54$$