

Name:

Fractions: Equations with Variables on Both Sides

$$\boxed{1} \quad \frac{x-1}{5} = \frac{7}{x-1}$$

$$\boxed{2} \quad \frac{2}{x} = 1 - \frac{3}{x+2}$$

$$\boxed{3} \quad \frac{2x-1}{8} = \frac{3}{4x} + 9$$

$$\boxed{4} \quad \frac{x}{5} + \frac{2}{3} - 2 = x - \frac{2}{5}$$

$$\boxed{5} \quad \frac{2}{5}x + x = -3 + \frac{1}{2}x$$

$$\boxed{6} \quad x + \frac{2}{3} = \frac{1}{4}x - 1$$

$$\boxed{7} \quad 3 - \frac{1}{4}x = \frac{1}{3} + x$$

$$\boxed{8} \quad \frac{-4(x+5)}{7} = \frac{12x}{7(x-2)}$$

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Fractions: Equations with Variables on Both Sides

Answers

$$\boxed{1} \quad \frac{x-1}{5} = \frac{7}{x-1}$$

$$x = (1 + \sqrt{35}, 1 - \sqrt{35})$$

$$\boxed{2} \quad \frac{2}{x} = 1 - \frac{3}{x+2}$$

$$x = (-1, 4)$$

$$\boxed{3} \quad \frac{2x-1}{8} = \frac{3}{4x} + 9$$

$$x = \frac{73 + \sqrt{5377}}{4},$$
$$\frac{73 - \sqrt{5377}}{4}$$

$$\boxed{4} \quad \frac{x}{5} + \frac{2}{3} - 2 = x - \frac{2}{5}$$

$$x = -\frac{7}{6}$$

$$\boxed{5} \quad \frac{2}{5}x + x = -3 + \frac{1}{2}x$$

$$x = -\frac{10}{3}$$

$$\boxed{6} \quad x + \frac{2}{3} = \frac{1}{4}x - 1$$

$$x = -\frac{20}{9}$$

$$\boxed{7} \quad 3 - \frac{1}{4}x = \frac{1}{3} + x$$

$$x = \frac{32}{15}$$

$$\boxed{8} \quad \frac{-4(x+5)}{7} = \frac{12x}{7(x-2)}$$

$$x = (-3 - \sqrt{19}, -3 + \sqrt{19})$$