

Name :

Date :

Solving Rational Inequalities Worksheet

Solve each inequality.

$$\boxed{1} \quad \frac{(x+3)(x+5)}{x+2} \geq 0$$

$$\boxed{2} \quad \frac{x^2+5x-6}{x-3} \geq 0$$

$$\boxed{3} \quad \frac{t^2-6t^2}{t-2} > 0$$

$$\boxed{4} \quad \frac{2}{(x-1)^2} + 1 < 0$$

$$\boxed{5} \quad \frac{x^2+2x-15}{x^2+7x} > 0$$

$$\boxed{6} \quad \frac{1}{(x+2)(x-3)^2} > 0$$

$$\boxed{7} \quad \frac{x^2}{x^2+x} \geq 0$$

$$\boxed{8} \quad \frac{x^2+x-6}{x^2-3x-4} \leq 0$$

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Answers

$$\boxed{1} \quad \frac{(x+3)(x+5)}{x+2} \geq 0$$

$$-5 \leq x \leq -3 \text{ or } x > -2$$

$$\boxed{2} \quad \frac{x^2 + 5x - 6}{x - 3} \geq 0$$

$$-6 \leq x \leq 1 \text{ or } x > 3$$

$$\boxed{3} \quad \frac{t^2 - 6t^2}{t - 2} > 0$$

$$t < 0 \text{ or } 0 < t < 2$$

$$\boxed{4} \quad \frac{2}{(x-1)^2} + 1 < 0$$

No solutions

$$\boxed{5} \quad \frac{x^2 + 2x - 15}{x^2 + 7x} > 0$$

$$x < -7 \text{ or } -5 < x < 0 \text{ or } x > 3$$

$$\boxed{6} \quad \frac{1}{(x+2)(x-3)^2} > 0$$

$$-2 < x < 3 \text{ or } x > 3$$

$$\boxed{7} \quad \frac{x^2}{x^2 + x} \geq 0$$

$$x < -1 \text{ or } x > 0$$

$$\boxed{8} \quad \frac{x^2 + x - 6}{x^2 - 3x - 4} \leq 0$$

$$-3 \leq x < -1 \text{ or } 2 \leq x < 4$$