

Intermediate Algebra Skill

Solving Rational Inequalities: Linear (Constant) Numerator and Linear Denominator; RHS 0

Solve the following Rational Inequalities:

$$1) \frac{w-1}{w+4} \geq 0$$

$$2) \frac{w+3}{w-6} > 0$$

$$3) \frac{2w-9}{w-6} < 0$$

$$4) \frac{3w+7}{w+8} \leq 0$$

$$5) \frac{3+p}{6-p} \geq 0$$

$$6) \frac{1-p}{2+p} > 0$$

$$7) \frac{4-p}{5-p} < 0$$

$$8) \frac{12-p}{8-p} \leq 0$$

$$9) \frac{1}{x+7} < 0$$

$$10) \frac{x+1}{x-3} \geq 0$$

$$11) \frac{3x+2}{x-3} \leq 0$$

$$12) \frac{x}{x+3} \geq 0$$

Answers to Solving Rational Inequalities: Linear (Constant) Numerator and Linear Denominator; RHS 0

1) $(-\infty, -4) \cup [1, \infty)$

2) $(-\infty, -3) \cup (6, \infty)$

3) $\left(\frac{9}{2}, 6\right)$

4) $\left(-8, -\frac{7}{3}\right]$

5) $[-3, 6)$

6) $(-2, 1)$

7) $(4, 5)$

8) $(8, 12]$

9) $(-\infty, -7)$

10) $(-\infty, -1] \cup (3, \infty)$

11) $\left[\frac{-2}{3}, 3\right)$

12) $(-\infty, -3) \cup [0, \infty)$