

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