Sample Problems

Solve each of the following inequalities.

1.) $\dfrac{-2}{x-10} < 0$

2.) $\dfrac{x+7}{x-3} > 0$

3.) $\dfrac{x-1}{x+2} < 0$

4.) $\dfrac{p-5}{3-p} \leq 0$

5.) $\dfrac{2t+7}{t-4} \geq 3$

Practice Problems

Solve each of the following inequalities.

1.) $\dfrac{a-1}{a} > 0$

2.) $\dfrac{3x+6}{2x-12} \leq 0$

3.) $\dfrac{-x+8}{x-2} \geq 5$

4.) $\dfrac{b+3}{5-2b} \leq 4$

5.) $\dfrac{3x-1}{x} \leq -1$

6.) $\dfrac{-2x+5}{x+6} > -2$

7.) $\dfrac{2}{p-1} \geq \dfrac{3}{4}$

8.) $\dfrac{2}{m+3} \leq 1$

Sample Problems - Answers

1.) $x > 10$ - in interval notation: $(10, \infty)$

2.) $x < -7$ or $x > 3$ - in interval notation: $(-\infty, -7) \cup (3, \infty)$

3.) $-2 < x < 1$ - in interval notation: $(-2, 1)$

4.) $p < 3$ or $p \geq 5$ - in interval notation: $(-\infty, 3) \cup [5, \infty)$

5.) $4 < t \leq 19$ - in interval notation: $(4, 19]$

Practice Problems - Answers

1.) $a < 0$ or $a > 1$ - in interval notation: $(-\infty, 0) \cup (1, \infty)$

2.) $-2 \leq x < 6$ - in interval notation: $[-2, 6)$

3.) $2 < x \leq 3$ - in interval notation: $(2, 3]$

4.) $b \leq \frac{17}{9}$ or $b > \frac{5}{2}$ - in interval notation: $\left(-\infty, \frac{17}{9}\right] \cup \left(\frac{5}{2}, \infty\right)$

5.) $0 < x \leq \frac{1}{4}$ - in interval notation: $\left(0, \frac{1}{4}\right]$

6.) $x > -6$ - in interval notation: $(-6, \infty)$

7.) $1 < p \leq \frac{11}{3}$ - in interval notation: $\left(1, \frac{11}{3}\right]$

8.) $m < -3$ or $m \geq -1$ - in interval notation: $(-\infty, -3) \cup [-1, \infty)$

