

Solve the following inequalities. Write your solution in interval form and sketch it graphically on the number line.
[Keep this worksheet with your homework for Homework Checks.]

1. $(2x + 4)(x - 3) > 0$

2. $x^2 - 3x - 18 \leq 0$

3. $x^2 + 4x + 4 \geq 0$

4. $x^2 - 9 < 0$

5. $2x^2 + x \geq 1$

6. $(x + 2)^2(x - 5)(x + 6) \leq 0$

7. $\frac{x-3}{(x+1)^2} \geq 0$

8. $\frac{3x-6}{x+4} < 0$

9. $\frac{3+x}{3-x} \geq 1$

10. $\frac{x^2-4}{x^2+4} \geq 0$

11. $\frac{(x-1)^2}{(x+1)(x+2)} > 0$

Absolute Value Exercises: Appendix A, p. A9: #47-55(odd)

Odd-numbered interval notation answers.

(1). $(-\infty, -2) \cup (3, \infty)$ (3). $(-\infty, \infty)$ (5). $(-\infty, -1] \cup [1/2, \infty)$ (7). $[3, \infty)$ (9). $[0, 3)$ (11). $(-\infty, -2) \cup (-1, 1) \cup (1, \infty)$