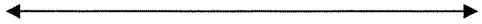
Precalculus Solving Quadratic Inequalities Worksheet

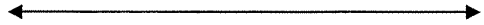
Steps

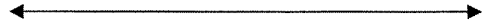
a. Set inequality to zero
b. Factor is possible
c. Set each factor equal to zero to obtain critical numbers
d. Place critical numbers on number line
e. Use interval testing
f. Write solution using interval notation

Solve and graph all solutions. Write interval Answer below

1. $x^2 + 4x + 3 \leq 0$  1. _____

2. $5x^2 + 10 \geq 27x$ 2. _____

3. $9x^2 + 6x + 1 \leq 0$  3. _____

4. $9x^2 + 31x \leq -12$  4. _____

5. $4x^2 + 4x + 1 > 0$ 5. _____

6. $4x^2 < 9$ 6. _____

7. $5 - 2x^2 \geq -3x$ 7. _____

Answers:

1. $[-3,-1]$

2. $(-\infty,2/5]\cup[5,\infty)$

3. $[-1/3]$

4. $[-3,-4/9]$

5. $(-\infty,-1/2)\cup(-1/2,\infty)$

6. $(-3/2,3/2)$

7. $[-1,5/2]$