

## §P.1 &amp; P2: Real Numbers and Equations

- 1.] Use the number line and interval notation to describe the subset of real numbers that the following inequalities represent:

a.)  $-1 < x \leq 4$

b.)  $x > -3$

- 2.] Simplify the following expressions:

a.)  $|3 - 8|$

b.)  $-3 \cdot |-3|$

c.)  $\frac{2}{3} - \frac{5}{4}$

d.)  $\frac{3x}{10} \cdot \frac{5}{6} + 3x$

e.)  $\frac{\frac{6x+6}{2}}{\frac{3}{5x}}$

- 3.] Solve the linear equation:  $\frac{5x}{4} + \frac{1}{2} = x - \frac{1}{2}$

4.] Solve the quadratic equation:  $16x^2 - 9 = 0$

5.] Solve the quadratic equation:  $x^2 - 2x - 8 = 0$

6.] Solve the quadratic equation:  $x^2 + 8x + 14 = 0$

7.] Solve the quadratic equation:  $2x^2 - x - 1 = 0$

8.] Solve the quadratic equation:  $|3x + 4| = -x + 8$