Inequalities in One Variable

Review:

- Write an inequality for:
  - (-2, 6]
  - [4, ∞)
- Solving inequalities – Main thing to remember is when multiplying or dividing by a negative, be sure to switch the direction of the inequality.
  - EX: Solve: $6x - 4 \leq 2 + 8x$
  - Solve: $3 + \frac{2}{7}x > x - 2$
- Solving absolute value inequalities: Handled the same as solving absolute value equations.
  - Solve: $|1 - 2x| < 5$
  - $2|x + 10| \geq 9$

Solving Polynomial Inequalities

- Find all zeros
- Put zeros in order from least to greatest
- "Cover" entire number line
- Select test values in each interval

    - EX: Solve: $x^2 - x - 20 < 0$. Then graph solution set.

    - EX : Solve : $4x^2 - 5x > 6$