Topic List – Midterm #1

- solving and graphing inequalities (Section 1.2)
    - inequality notation vs. interval notation
    - absolute value inequalities
        - break into two equations

- graphing on the coordinate plane (Section 1.3-1.4)
    - plotting points (LABEL)
    - distance formula
    - midpoint formula
    - circles
        - equations of circles
        - graphing (shading intervals)
    - sketching intervals
        - $x > 2$ and $y < -1$
    - axis-intercepts
        - y-intercepts: $x = 0$
        - x-intercepts: $y = 0$
    - symmetries
        - y-axis
        - x-axis
        - origin

- functions (Section 1.6)
    - evaluating functions
        - $f(-2)$, $f(x+h)$
    - domain and range
        - domain: all possible x-values
        - range: all possible y-values
    - even and odd functions
        - even: y-axis symmetry
        - odd: origin symmetry
    - finding functions given points

** linear functions (Section 1.7)
- equations of the line
- slope
- parallel lines (same slope)
- perpendicular lines (slope is negative reciprocal)

** quadratic functions (Section 1.8)
- completing the square
- equations in standard form
- vertex identification
- intercepts
    ~ x-intercept: quadratic equation
- shifts of graphs