Name: _____

Date:: _____

Algebra & Trigonometry Quiz
Chapter 1.1

Important Properties and Formulas

The Distance Formula

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

The Midpoint Formula

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

Equation of a Circle

$$(x - h)^2 + (y - k)^2 = r^2$$

Terminology about Lines

Slope: $\quad m = \dfrac{y_2 - y_1}{x_2 - x_1}$

The Slope–Intercept Equation:
$$y = mx + b$$

The Point–Slope Equation:
$$y - y_1 = m(x - x_1)$$

Horizontal Line: $\quad y = b$

Vertical Line: $\quad x = a$
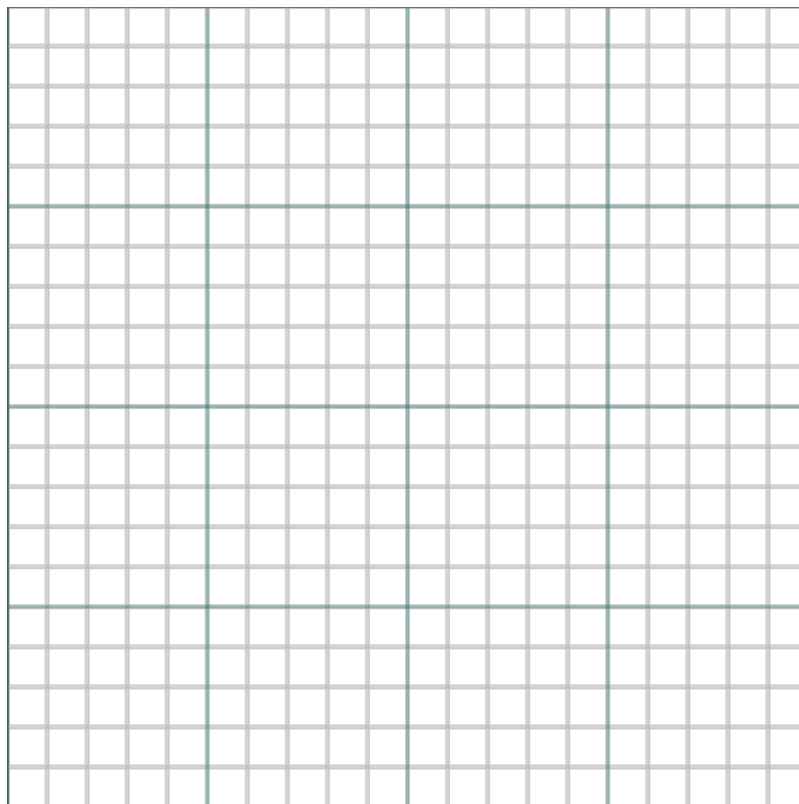
Parallel Lines: $\quad m_1 = m_2, \ b_1 \neq b_2$

Perpendicular Lines:
$$m_1 m_2 = -1, \text{ or}$$
$$x = a, y = b$$

Create a table to evaluate the function at the x-values {-3, -2, -1, 0, 1, 2, 3} and plot

$$36.\ y = x^2 + 2x - 1$$

x	y
-3	
-2	
-1	
0	
1	
2	
3	

Find the distance between the pair of points

62. $(-4, -7)$ and $(-1, 3)$

64. $\left(-\frac{3}{5}, -4\right)$ and $\left(-\frac{3}{5}, \frac{2}{3}\right)$
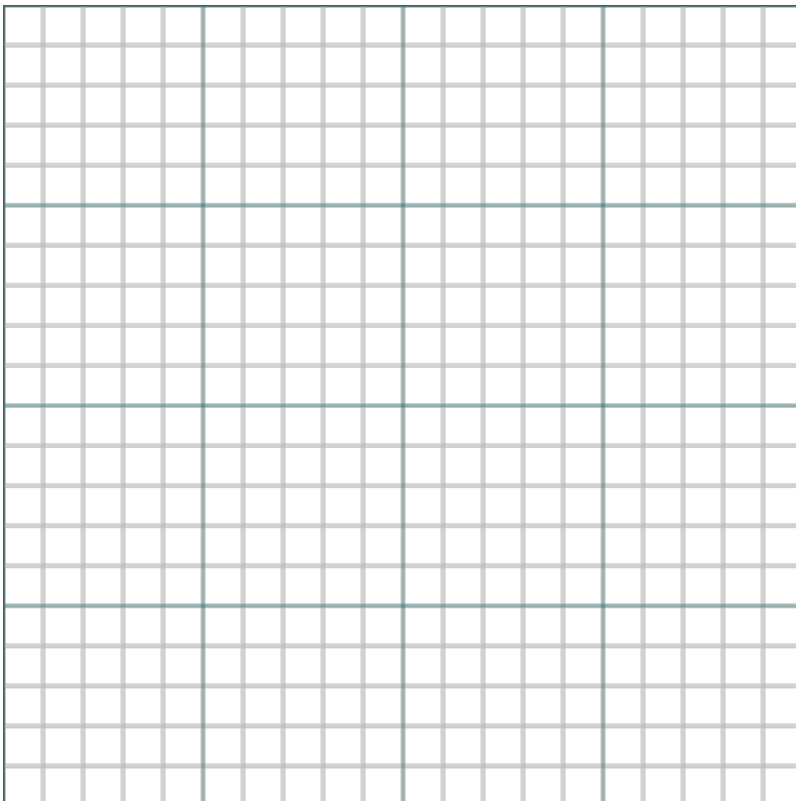
Find the midpoint of the line segment with the given endpoints

 78. $(7, -2)$ and $(9, 5)$ **82.** $(1, -2)$ and $(-1, 2)$

Find the *canonical* equation of a circle given:

96. Center $(6, -5)$, passes through $(1, 7)$

114.