Quiz 1 Review Guide: Sections 1.1–1.3

Name: _____ HR: _____

Covers: The Cartesian plane, Distance & Midpoint Formulas, graphs of equations, intercepts, symmetry, circles, slope, and equations of lines.

Worked Reminders (different numbers than the quiz — use these to self-check your method)

Distance & Midpoint	*Intercepts & Symmetry*	*Slope & Equation*
Find the distance and midpoint between (−3, 2) and (5, −4).	Find the intercepts of $y = x^2 - 4$ and test for symmetry. x-int: y-int: Symmetry:	Find the equation of the line through (1, 5) and (3, 9).

Circle Equation	*Parallel & Perpendicular*
Write the equation of a circle with center (−1, 4) and radius 5.	Find the line through (0, −2), parallel and perpendicular to $y = 4x + 1$. Parallel: Perpendicular:

Can You... (1.1)	*Can You... (1.2)*	*Can You... (1.3)*	*Study Tips*
☐ Plot points and name their quadrant? ☐ Use the Distance Formula? ☐ Use the Midpoint Formula?	☐ Find x- and y-intercepts? ☐ Test an equation for symmetry? ☐ Write the equation of a circle?	☐ Find slope from two points? ☐ Write an equation given slope + point? ☐ Identify parallel/ perpendicular lines?	Redo the worked reminders on scratch paper without looking. Then try a few problems from the 1.1–1.3 practice sheets cold.

Formulas at a Glance — Quiz 1 (Sections 1.1–1.3)

$$\mathbf{d} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \qquad M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right) \qquad (x - h)^2 + (y - k)^2 = r^2$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} \qquad y = mx + b \qquad y - y_1 = m(x - x_1) \qquad m_1 = \frac{-1}{m_2} \quad (\perp)$$