Equations of Lines

Point Slope Form of an Equation

$$y - y_1 = m(x - x_1)$$

Slope Formula

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Examples:

1. Find the slope of a line drawn perpendicular to the line through (-2, -4) and (3, 5).

2. Find the equation of the line through (-1, 3) with a slope of -2.

3. Find the equation of the line through (1, 3) and (-2, 1).

4. Find the equation of the line through (2, -1) and parallel to $3y + 5x - 6 = 0$.

Class Work

1. Find the slope of a line drawn perpendicular to the line through (3, 5) and (6, -3).

2. Find the equation of the line through (-3, -7) with a slope of 3.

3. Find the equation of the line through (-2, -3) and (5, -6).

4. Find the equation of the line through (3, 4) and parallel to $4x + 3y + 7 = 0$.