Lines & Slope

lines that coincide
they are the same line
same slopes, same y-intercept

parallel lines
have same slope but different y-intercepts

perpendicular lines
have slopes that are reciprocals w/ opposite signs

y=mx
line that goes through (0,0) with slope m.

lines are straight because the slope is a constant, it doesn't change

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

$m = \frac{\text{rise}}{\text{run}}$

Slope-intercept form
$y = mx + b$
m = slope
b = y-intercept

Standard form
$Ax + By = C$
where A, B, & C are integers

Point-Slope Form
$y - y_1 = m(x - x_1)$
(x_1, y_1) is any point on the line.