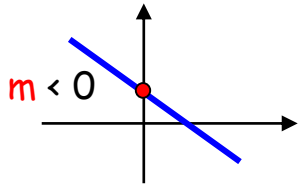
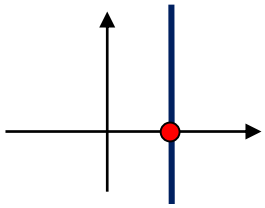
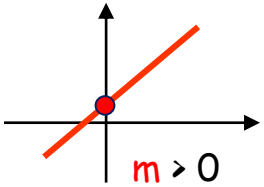
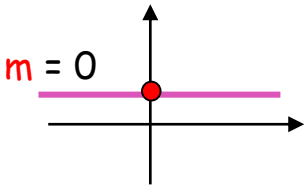




m = undefined





Distance between 2 points

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

Terminology

$$Mid = \left[\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right]$$

Median – midpoint
Bisector – midpoint

Perpendicular – Right Angled
Altitude – right angled

$m_1.m_2 = -1$

Possible values for gradient

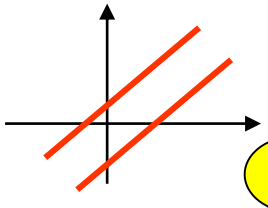
Straight Line

$y = mx + c$

Form for finding line equation

$y - b = m(x - a)$

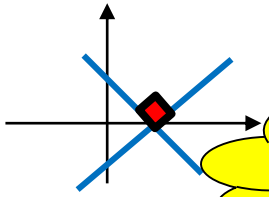
(a,b) = point on line

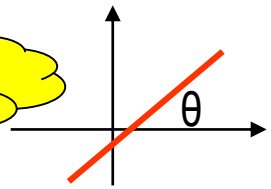


Parallel lines have same gradient

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

c = y intercept (0,c)



For Perpendicular lines the following is true.
$m_1.m_2 = -1$

m = tan θ