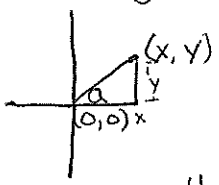
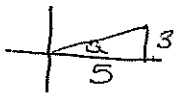
To find an angle, with a known x and y



$\tan(a) = \frac{y}{x}$

$a = \tan^{-1}\left(\frac{y}{x}\right)$

Ex: $x = 5$, $y = 3$

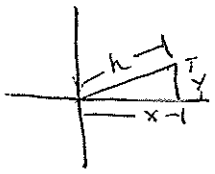


$\tan(a) = \left(\frac{3}{5}\right) = 0.6$

$a = \tan^{-1}(0.6)$

$a = 30.96°$

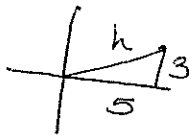
To find the slope (hypotenuse)



$h^2 = x^2 + y^2$

$h = \sqrt{x^2 + y^2}$

Ex: $x = 5$, $y = 3$



$h^2 = 3^2 + 5^2$

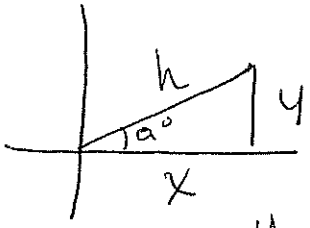
$h^2 = 9 + 25$

$h^2 = 34$

$h = \sqrt{34}$

$h = 5.83$

To find the x and y when given an angle (a) and hypotenuse (h)



$\sin a = \frac{y}{h}$

$y = h\sin(a)$

$\cos a = \frac{x}{h}$

$x = h\cos(a)$

Ex: 32° angle, slope = 6

$\sin(32) = \frac{y}{6}$

$y = 6(\sin(32))$

$y = 6(.5299)$

$y = 3.1795$

$\cos(32) = \frac{x}{6}$

$x = 6\cos(32)$

$x = 6(.848)$

$x = 5.088$