Algebra & Trig - MATH 1450-02 - Quiz #4 - Jan 24, 2013

Name:

For the line

$$3x - 2y + 6 = 0$$

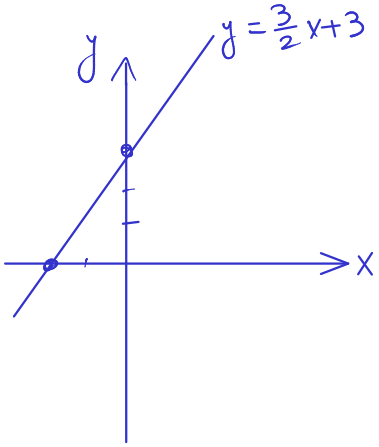
1. Find the slope and the intercepts of it, and then draw it.

$x=0 \Rightarrow$ y-int: $3\cdot 0 - 2y + 6 = 0$

$\Rightarrow \boxed{y = 3}$

$y=0 \Rightarrow$ x-int: $3x - 2\cdot 0 + 6 = 0$

$\Rightarrow \boxed{x = -2}$



$m = \frac{3-0}{0-(-2)} = 3/2$

or $y = \frac{3}{2}x + 3 \Rightarrow m = 3/2$

2. Find the equation of the line perpendicular to it, passing through the origin.

$m_1 = 3/2 \Rightarrow m_2 = \frac{-1}{m_1} = \frac{-1}{3/2} = -2/3$

$P(0,0)$

$y - 0 = \frac{-2}{3}(x-0) \Rightarrow y = -\frac{2}{3}x$