#7| Through $(-2,5)$.

Parallel to $y = \frac{-8}{3}x + 4$

Soln

Slope of Both lines

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

$y - 5 = m(x + 2)$

$y - 5 = \left(\frac{-8}{3}\right)(x+2)$

$3y - 15 = -8(x+2)$

$3y - 15 = -8x - 16$

$\therefore 8x + 3y = -1$

#9| Through $(0,3)$ perp. $y = \frac{3}{4}x$

Soln

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

$y - 3 = m(x - 0)$

$\frac{3}{4}m = -1$

$m = \frac{-4}{3}$

$y - 3 = \frac{-4}{3}x$

$3y - 9 = -4x$

$\therefore 4x + 3y = 9$

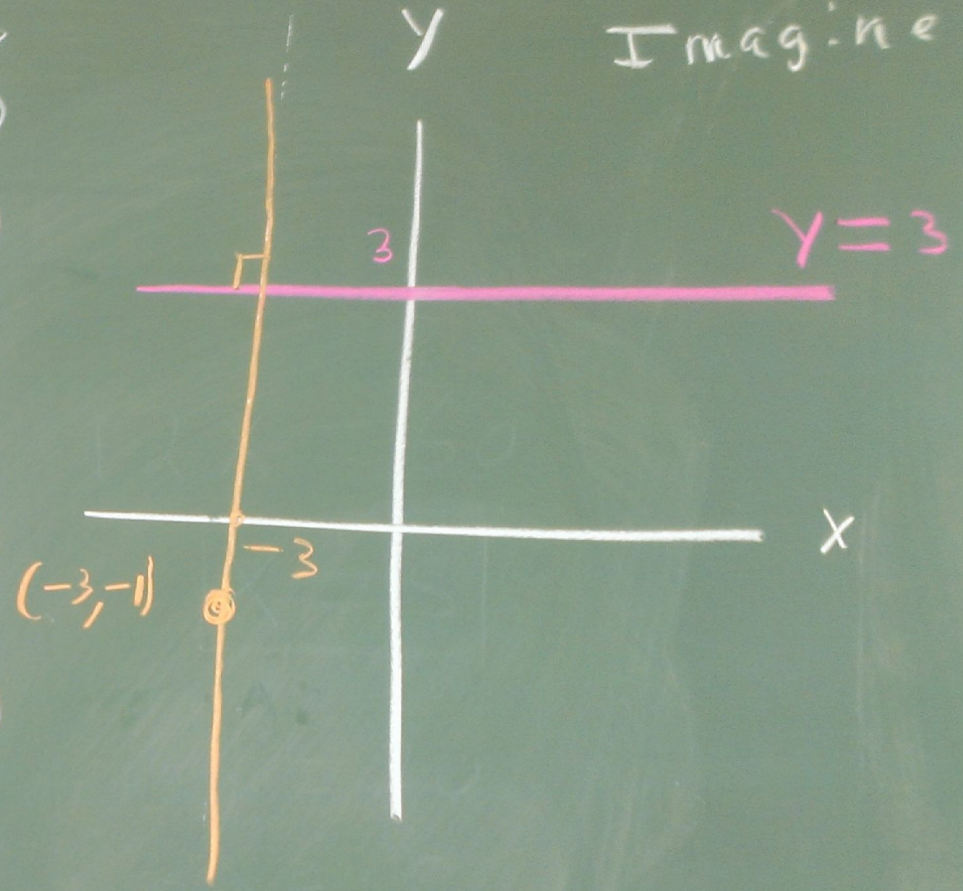
#10 Through $(-3,-1)$ perp. to $y=3$

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

$y+1 = m(x+3)$

$m \cdot m_1 = -1$

$m_1 = \text{undef.}$



$\therefore x = -3$

Graph $2x+5y=0$

SOLN

$x=0$, $y=0$

$x=1$, $y=\frac{-2}{5}$

$\}$ $2(1)+5y=0$

$5y=-2$

$y=\frac{-2}{5}$