

Handwritten 1A Quiz

$$2x - 3y = 6$$

1. $x_{int} = \frac{c}{a} = \frac{6}{2} = 3 \rightarrow (3, 0)$
 $y_{int} = \frac{c}{b} = \frac{6}{-3} = -2 \rightarrow (0, -2)$

2. Slope = $M = \frac{-a}{b} = \frac{-2}{3} = \frac{2}{3}$

3. Slope $\parallel = \frac{2}{3}$

4. Slope $\perp = \frac{2}{3} = -\frac{3}{2}$

5. equation parallel
 $2x - 3y = c$
 (can be any # except 6)

6. equation perpendicular
 $3x + 2y = c$
 (can be any #)

7. $(y - y') = M(x - x')$ $x_{int} = \frac{6}{2} = 3$

$$(y - 3) = \frac{2}{3}(x - (-1)) \quad (2, 0)$$

$$(y - 3) = \frac{2}{3}x + \frac{2}{3} \quad (3, 0)$$

$$-2x + 3y - 9 = 2x + 2$$

$$-2x + 3y - 9 + 9 = 2 + 9$$

$$-2x + 3y = 11$$

8. $(y - y') = M(x - x')$

$$(y - (-1)) = \frac{2}{3}(x - 2)$$

$$(y + 1) = \frac{2}{3}x + \frac{6}{3} \quad (\frac{2}{3})$$

$$+3x + 2y + 8 = 2x + 6$$

$$5x + 2y + 8 - 8 = 6 - 8$$

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

9. $(5x + y = 10) (3)$
 $2x - 3y = 6$

$$15x + 3y = 30$$

$$2x - 3y = 6$$

$$\frac{13x}{17} = \frac{26}{17}$$

$$x = \frac{26}{17}$$

$$y_{int} = \frac{5}{10} = \frac{1}{2}$$

$$(0, 10)$$

$$5(\frac{26}{17}) + y = 10$$

$$(130 - 10) = 10$$

$$(\frac{36}{17}, \frac{-10}{17})$$

$$\begin{array}{r} 130 + 17y = 10 \\ -130 \\ \hline 17y = -120 \\ y = \frac{-120}{17} \end{array}$$

$$y = \frac{-10}{17}$$

$$5x + y = 10$$

10.

$$(0, 10)$$

$$2x - 3y = 6$$

$$(3, 0)$$

$$(0, -2)$$

$$(\frac{26}{17}, \frac{-10}{17})$$

$$(3, 0)$$

$$(0, 2)$$

$$(2, 0)$$

$$(0, 10)$$

$$(\frac{36}{17}, \frac{-10}{17})$$

$$(\frac{26}{17}, \frac{-10}{17})$$