N: Key D: _____ P: 1 2 3 4 5 6

Algebra 2 : Topic 2 // ***Quiz 1 Review*** *Mission Hills Math 2013*

*↑ May consist of different questions

1. Find the slope of the line that passes through the points (-1, 3) and (2, 8)

$m = \frac{8-3}{2--1} = \frac{5}{3}$ (x_1, y_2 x_1, y_2) **$m = 5/3$**

2. Find the y-intercept of the line
$-2y = -3x + 32$
$\frac{-2y}{-2} = \frac{-3x}{-2} + \frac{32}{-2}$

$y = \frac{3}{2}x - 16$ **(0, -16)**

3. Write the equation of the horizontal line that passes through the point (-2, 7)

horiz → y = **y = 7**

4. Find the x-intercept of the line
$-3x + 2y = -15$ ↘ y = 0

$-3x + 2(0) = -15$

$\frac{-3x}{-3} = \frac{-15}{-3} \rightarrow x = 5$ **(5, 0)**

5. Write the equation of the line that has a slope of $-1/3$ and passes through the point (9,-3)
(x_1, y_1)

$y - y_1 = m(x - x_1)$
$y - -3 = -1/3(x - 9)$
$y + 3 = -1/3x + 3$
$-3 \quad -3$
$y = -1/3x$

6. Write the equation of a line perpendicular to $y = \frac{-2}{5}x - 2$ that goes through (-8, 3).
(x_1, y_1) → $m_\perp = 5/2$

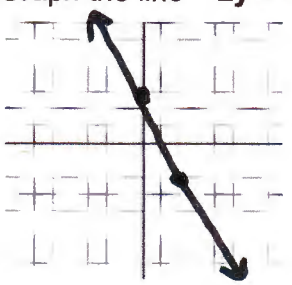
$y - y_1 = m(x - x_1)$
$y - 3 = 5/2(x - -8)$
$y - 3 = 5/2(x + 8)$
$y - 3 = 5/2x + 20/2$
$y - 3 = 5/2x + 20$
$+3 \quad +3$
$y = 5/2x + 23$

7. Write the equation of the line that passes through the points (-2,3) and (10,9)
(x_1, y_1)

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{9-3}{10--2} = \frac{6}{12} = \frac{1}{2}$

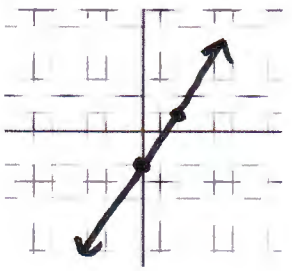
$y - y_1 = m(x - x_1)$
$y - 3 = 1/2(x - -2)$
$y - 3 = 1/2(x + 2)$
$y - 3 = 1/2x + 1$
$+3 \quad +3$

8. Graph the line $2y = -5x + 6$ **$y = 1/2x + 4$**



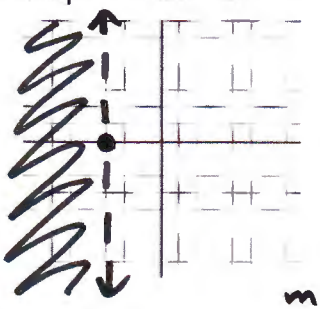
$\frac{2y}{2} = \frac{-5x}{2} + \frac{6}{2}$
$y = -5/2x + 3$

9. Graph the line $4y - 6x = -8$



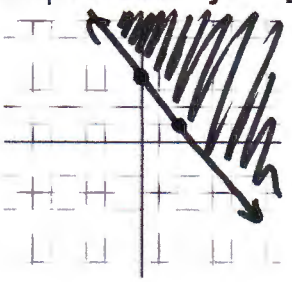
$4y - 6x = -8$
$+6x \quad +6x$
$\frac{4y}{4} = \frac{6x}{4} - \frac{8}{4}$
$y = 3/2x - 2$

10. Graph the line $x < -3$



↘ vertical ↓ dashed

11. Graph the line $y \geq -3/2x + 4$
m b



↘ solid

↑ Study up!