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Algebra 2: Topic 2 // 2.4 Practice // Practice 2

Mission Hills Math 2013

 $Y_1 - Y_1 = w(x - x_1)$ Directions: Write the equation of the following lines in slope-intercept form.

1. Write the equation of the line that has a slope of -3 and a y-intercept of 1.

Y=-3×+1

2. Write the equation of the line that has a slope of 2 and a y-intercept of 0.

m= 2

m=0

3. Write the equation of the line that has a slope of 0 and a y-intercept of -6.

4. Write the equation of the line that has an undefined slope and an x-intercept of 2.

m = undefined

5. Write the equation of the line that has a slope of 1 and passes through (4, -3)

Y-Y, =m(x-X,) Y--3=1(X-4) Y+3 = X-4 -

6. Write the equation of the line that has a slope of  $\frac{1}{2}$  and passes through (-8, 0)

 $\lambda - 0 = \frac{1}{2}(x - - 8)$ λ= ₹ (x+8)

7. Write the equation of the line that has a slope of -6 and passes through (-1, -1) X, Y,

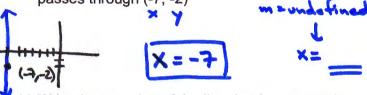
Y--1 = -6(x--1) Y+1 = -6 (X+1) 8. Write the equation of the line that has a slope of  $-\frac{2}{3}$  and passes through (6, 2)

Y-2=-=(x-6)

9. Write the equation of the horizontal line that passes through (4, 1)



10. Write the equation of the vertical line that passes through (-7, -2)



11. Write the equation of the line that has a " slope of zero and passes through (-3, 5) \ \_\_\_\_\_\_\_\_. m = 0

Y-5=0(x--3) Y-5 = 0(X+3)

12. Write the equation of the line that passes through (2, -4) and (4, 2)

 $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - - 4}{4 - 2} = \frac{2 + 4}{2} = \frac{6}{2}$ 

Y-2=3(x-4) Y-2=3x-12

13. Write the equation of the line that passes

through (-1, 6) and (3, 2)  

$$x_1 y_1 \quad x_2 y_2$$
  
 $m = \frac{2-6}{3--1} = \frac{-4}{4} = -1$  (3,2)  
 $y-2=-1 (x-3)$   
 $y-2=-x+3$   
 $+2$   $+3$   $+3$   $+3$ 

14. Write the equation of the line that passes through (0, 4) and (6, 7)

15. Write the equation of the line that passes through (2, 4) and (2, -10)

$$m = \frac{-10 - 4}{2 - 2} = \frac{-14}{0} \rightarrow \text{undefined}$$

$$Vertical$$

$$X = 2$$

$$X = 2$$

16. Write the equation of the line that passes through (5, -3) and (4, -5)

$$x_{1} \ y_{1} \ x_{2} \ y_{2}$$

$$m = \frac{-5 - -3}{4 - 5} = \frac{-5 + 3}{-1} = \frac{-2}{-1} = 2$$

$$y - -3 = 2(x - 5)$$

$$y + 3 = 2x - 10$$

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

17. Write the equation of the line that passes through (-7, 1) and (0,1)

$$m = \frac{1-1}{0--7} = \frac{0}{7} = 0$$
horizontal
$$y = 1$$

18. Write the equation of the line that passes

through (2, -4) and (-4, 1)  

$$x_1, y_1, x_2, y_2$$

$$y = \frac{1 - -4}{-4 - 2} = \frac{5}{-6}$$

$$y - 1 = \frac{5}{-6}(x - -4)$$

$$y - 1 = \frac{5}{-6}(x + 4)$$

$$y = \frac{5}{-6}(x - -4)$$

$$y = \frac{5}{-6}(x - -4)$$

19. Write the equation of the line that passes through the origin and the point (-7, 3)

20. Write the equation of the line that has an x-intercept of 5 and a y-intercept of -6.