Topic 2 Quiz 2 Review (2.3-2.4)

Name: key PER

mplete on your own paper.

Part 1: Writing equation of parallel lines
SHOW ALL WORK

1.) Find the slope of a line **parallel** to the line that passes through the points (-2, 0) and (0, 4). $\frac{0-4}{-2-0} = \frac{-4}{-2} = 2$ $y-4=2(x)$

2.) Find the equation of the line in slope-intercept form that goes through (-6,4) and is **parallel** to $y=-\frac{1}{2}x+2$? $y-4=-\frac{1}{2}(x+6)$ $y=-\frac{1}{2}x+1$

3.) Find the equation of the line that passes through (3, -2) and is **parallel** to $y=\frac{2}{3}x$? $y+2=\frac{2}{3}(x-3)$ $y=\frac{2}{3}x$

A. $y=\frac{2}{3}x-4$ B. $y=\frac{2}{3}x-2$ C. $y=\frac{2}{3}x+3$ D. $y=\frac{2}{3}x$

4.) Find the equation of a line **parallel** to $4y-8=3x$ and goes through the point (5, 1) in slope-intercept form. $4y=3x+8$ $y=3/4x+2$ $y-1=\frac{3}{4}(x-5)$ $y=\frac{3}{4}x-2.75$

5.) A line has equation $y=-\frac{2}{3}x+1$. What is the line **parallel** that passes through point (4, 1), write in point-slope form. $y-1=-\frac{2}{3}(x-4)$

Part 2: Writing equation of perpendicular lines
SHOW ALL WORK

6.) Find the slope of a line **perpendicular** to the line that passes through the points (5, 2) and (8, -1) in slope-intercept form. $\frac{2+1}{5-8} = \frac{3}{-3} = -1$

7.) Write the equation of a line that is **perpendicular** to $y=-\frac{2}{5}x-\frac{1}{3}$ and passes through the point (-5, -3) in point-slope form? $y+3=\frac{5}{2}(x+5)$

8.) Which of the following is an equation of a line perpendicular to $y=-3x-1$?

A. $y+3=x$ $y=x-3$ B. $2y-3=x$ $y=\frac{x+3}{2}$ C. $-x+3y=3$ $\frac{3y}{3}=\frac{x+3}{3}$ D. $3x+y=-3$ $y=-3x-3$

9.) Find the equation of the line in slope-intercept that goes through the point (-7, 5) and is **perpendicular** to $2x-3y=-18$. $-\frac{3y}{-3}=\frac{-2x}{-3}-\frac{18}{-3}$ $y=\frac{2}{3}x+6$ $y-5=-\frac{3}{2}(x+7)$ $y=-\frac{3}{2}x-5.5$

10.) Which is the slope of a line perpendicular to the line $y=-2x+6$?

A. 2 B. $\frac{1}{2}$ C. $-\frac{1}{2}$ D. -6 E. $-\frac{1}{6}$

11.) Which lines are perpendicular?

A. $y=\frac{1}{2}x+6$, $y=-\frac{1}{2}x+1$

B. $y=3x+1$, $y=3x-1$

C. $y=2x$, $y=\frac{1}{2}x$

D. $y=\frac{2}{3}x+3$, $y=-\frac{3}{2}x-1$

12.) Which of the following statements are true about lines *w, n, p,* and *z*?

$w:\ y=\frac{3}{2}x+2$ $\quad n:\ y=\frac{2}{3}x+6$ $\quad p:\ y=-\frac{3}{2}x-3$ $\quad z:\ y=\frac{2}{3}x+1$

I. $w \perp p$ $\quad$ **II.** $n \parallel z$ $\quad$ **III.** $z \perp p$

A. I only B. II only C. III only D. I and II E. II and III

Part 3: Writing equation of vertical and horizontal lines
SHOW ALL WORK

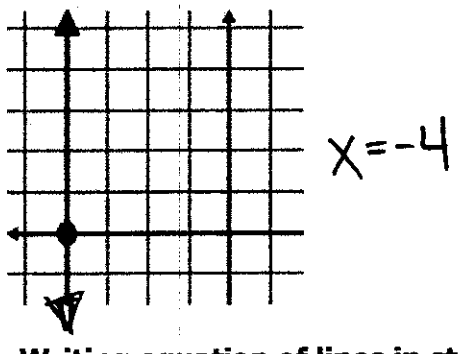
13.) Write the equations of the line that is horizontal and goes through (-4, -8).

$y=-8$

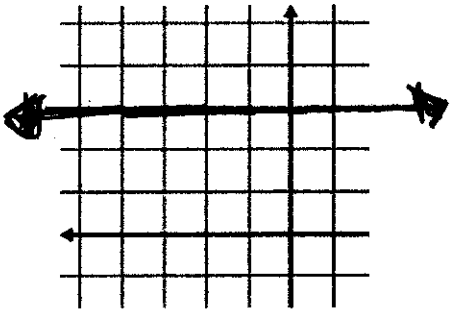
14.) Write the equation of the line that is vertical and gores through (-2, 7).

$x=-2$

15.) Write the equation of each line.



$x=-4$



$y=-3$

Part 4: Writing equation of lines in standard form.
SHOW ALL WORK

16.) Given the equation -3x + 7y = -42 find the x-intercept and y-intercept.

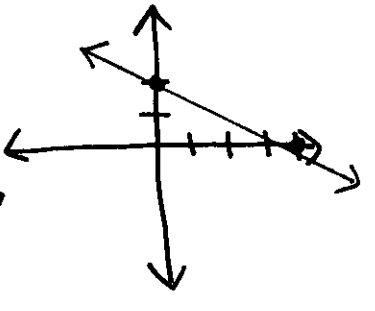
(14,0) and (0,-6)

17.) Given the equation 5x – 8y = -80 find the x-intercept and y-intercept.

(-16,0) and (0,10)

18.) Graph the equation -2x – 4y = -8.

(4,0) and (0,2)



19.) Convert 3x – 6y = 18 into slope-intercept form.

$-6y=-3x+18$

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

20.) Snickers and Kit Kats are on sale. Snickers are $0.50 and Kit Kats $0.35. Charlie spends $12 on the candy bars. Write an equation to represent the situation. Find the greatest number of Snickers that can be bought. Find the greatest number of Kit Kats that can be bought.

X: Snickers

y: kit kats

$0.5x+0.35y=12$

$0.5x=12$

$x=24$

$0.35y=12$

$y=34.29$

Max Snickers 24

Max Kit kat 34