CHAPTER 5 EXAM Review

*NAME*_____

GRAPH THE FOLLOWING LINES (5 points each)

#1. $y = -\frac{1}{2}x + \frac{1}{2}$

#2. $y = -\frac{5}{3}x - 10$

#3. $y = -2x + 6$

#4. $y = \frac{1}{4}x - 3$

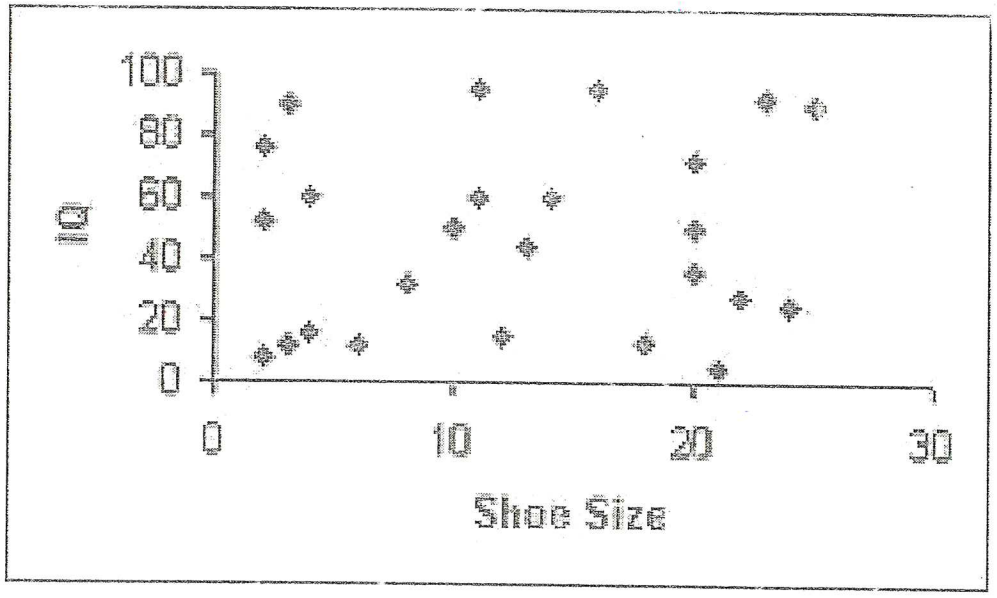
See back side

#5. What is the slope of any horizontal line(5 points)? Zero

Any vertical line(5 Points)? undefined

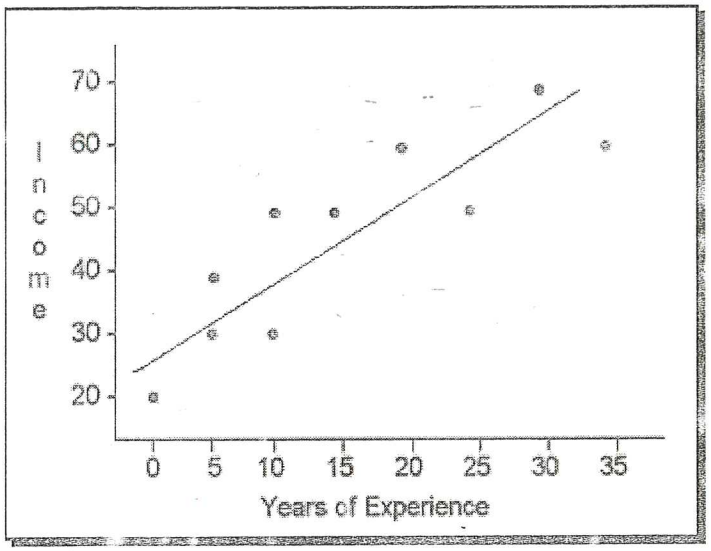
Determine whether each graph shows a *positive* correlation, a *negative* correlation, or *no* correlation. If there is a positive or negative correlation, describe its meaning in the situation. (5 points each)

6. The graph shows the shoe size and IQ of 25 people.



No Correlation

7. The graph shows the income and the years of experience in their job for a group of 10 people.



positive; get pay more with more experience

FTE----means Find The Equation (Answers need to be in standard or slope intercept form). (10 points each)

#8. FTE of a line passing through the points (-3,6) & (2,4).

(+2) $m = \frac{4-6}{2-(-3)} = \frac{-2}{5}$

$y = \frac{-2}{5}x + b$

(+4) $4 = \frac{-2}{5}(2) + b$

$4 = -\frac{4}{5} + b$

$4 = \frac{-4}{5} + b$

$+\frac{4}{5} \quad +\frac{4}{5}$

$4\frac{4}{5} = \frac{24}{5} = b$

$\frac{20}{5} + \frac{4}{5}$

$y = -\frac{2}{5}x + \frac{24}{5}$ (+4)

#9. FTE of a line passing through the point (2,-3) with a slope of 2.

(+1) $m = 2$

$y = 2x + b$

$-3 = 2(2) + b$

$-3 = 4 + b$

$-4 \quad -4$

$-7 = b$ (+5)

(+4) $y = 2x - 7$

#10. FTE of a line passing through the point (4, 7) with a slope of ½.

$m = \frac{1}{2}$

$y = \frac{1}{2}x + b$

$7 = \frac{1}{2}(4) + b$

$7 = 2 + b$

$-2 \quad -2$

$5 = b$

$y = \frac{1}{2}x + 5$

∥ same slope

⊥ opposite flip (reciprocal) slope

#11. FTE of a line parallel to $y = \frac{1}{4}x - 5$ and passes through the point (12,-6).

$m = \frac{1}{4}$ (+2)

$y = \frac{1}{4}x + b$

$-6 = \frac{1}{4}(12) + b$

$-6 = 3 + b$

$-3 \quad -3$

$-9 = b$ (+4)

$y = \frac{1}{4}x - 9$ (+4)

#12. FTE of a line parallel to $3x + 2y = 15$ and passes through the point (9,10).

$m = -\frac{3}{2}$ (+2)

$-3x \quad -3x$

$\frac{2y}{2} = \frac{-3x}{2} + \frac{15}{2}$ (+2)

$y = -\frac{3}{2}x + \frac{15}{2}$

$10 = -\frac{3}{2}(9) + b$

$10 = -\frac{27}{2} + b$

$+\frac{27}{2} \quad +\frac{27}{2}$

$\frac{47}{2} = b$ (+4)

$y = -\frac{3}{2}x + \frac{47}{2}$ (+2)

$\frac{10}{1} + \frac{27}{2} = \frac{20}{2} + \frac{27}{2}$

#13. FTE of a line perpendicular to $y = \frac{1}{3}x + 6$ and passes through the point (0,-4).

⊥ $m = -\frac{3}{1}$

$y = -3x + b$

$-4 = -3(0) + b$

$-4 = b$

$y = -3x - 4$

#14. FTE of a line perpendicular to $y = 5x + 2$ and passes through the point (5, 8)

$m = -\frac{1}{5}$

$y = -\frac{1}{5}x + b$

$8 = -\frac{1}{5}(5) + b$

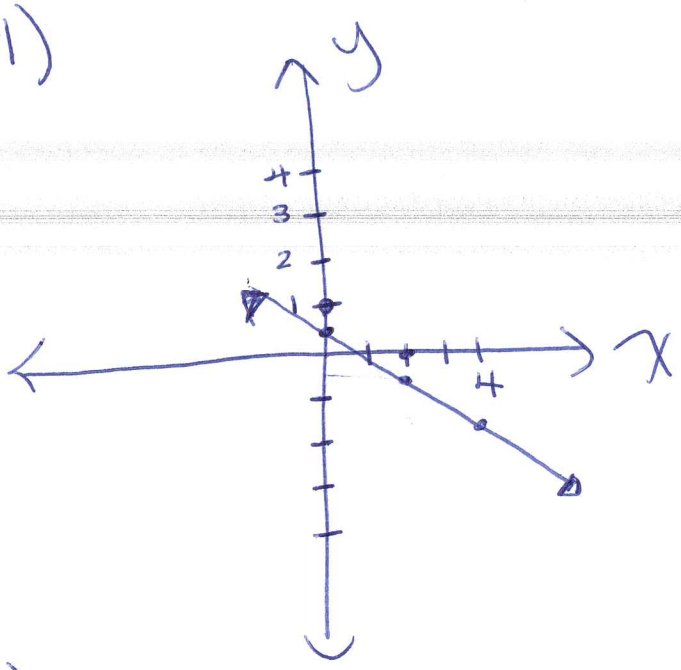
$8 = -1 + b$

$+1 \quad +1$

$9 = b$

$y = -\frac{1}{5}x + 9$

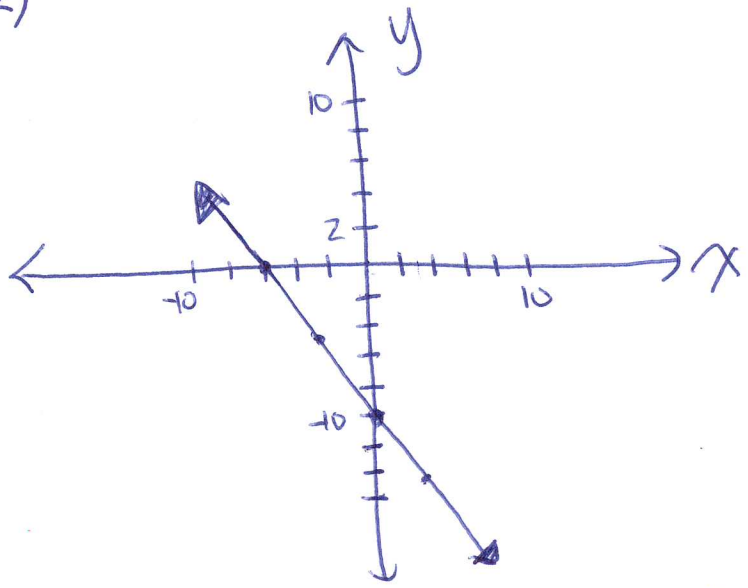
#1)



$m = \frac{-1}{2}$

$b = \frac{1}{2}$

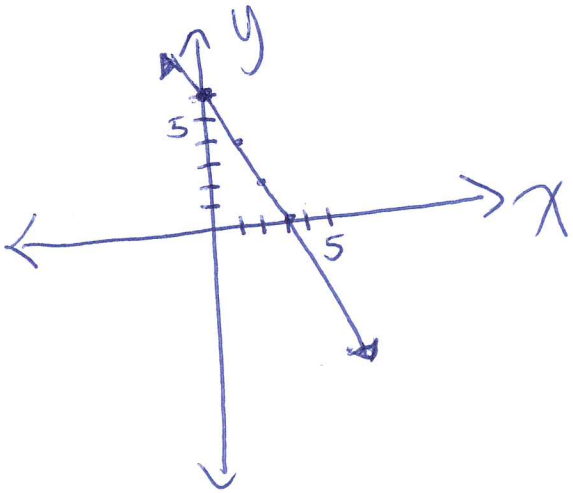
#2)



$m = \text{run} \quad \frac{-5}{3} = \frac{5}{-3}$

$b = -10$

#3) $m = \frac{-2}{1}$ $b = 6$



#4) $m = \frac{1}{4}$ $b = -3$