4.4 HOMEWORK HANDOUT: INVESTIGATING Y=AX, Y=X+B

PART A

1) Graph each line by generating a set of points that satisfies the equation.
Describe how each line compares to graph of y=x.

a) $y = 5x$ b) $y = 4x$ c) $y = \frac{1}{3}x$ d) $y = -$ $y = \frac{3}{4}x$

e) $y = -x$ e) $y = -4x$ f) $y = \frac{-1}{5}x$ g) $y = \frac{-2}{3}x$

2) Determine which line is steeper.

a) $y = 5x$ or $y = \frac{3}{4}x$ b) $y = -3x$ or $y = -5x$

c) $y = \frac{1}{3}x$ or $y = \frac{-1}{2}x$ d) $y = 2x$ or $y = -3x$

e) $y = \frac{-5}{4}x$ or $y = \frac{1}{3}x$ f) $y = -5x$ or $y = \frac{-4}{5}x$

3) Graph each line by generating a set of points that satisfies the equation.
Describe how each line compares to graph of y=x.

a) $y = x - 1$ b) $y = x + 2$ c) $y = x - 4$ d) $y = x + 5$

4) Match the line in Column A that is parallel to a line in Column B.

Column A	Column B
a) $y = \frac{2}{3}x + 4$	i) $y = \frac{-3}{2}x + 5$
b) $y = 5x + 3$	ii) $y = \frac{2}{3}x - 4$
c) $y = \frac{-3}{2}x - 1$	iii) $y = 5x - 2$
d) $y = -2x + 5$	iv) $y = -2x + 3$

5) For each equation below, determine the slope of a line that would be perpendicular to the line given.

a) $y = 3x$ b) $y = \frac{-1}{2}x$ c) $y = 5x - 7$

d) $y = \frac{-2}{3}x + 4$ e) $y = \frac{5}{7}x + 8$ f) $y = x$

6) Order the equations of these lines from steepest to least steep.

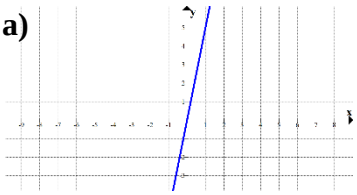
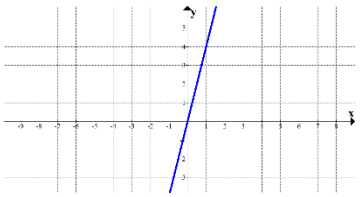
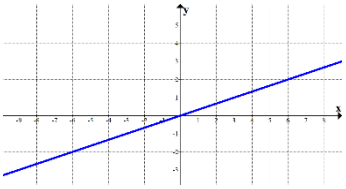
a) $y = 5x$ $y = 3x$ $y = \frac{1}{2}x$ $y = \frac{1}{8}x$

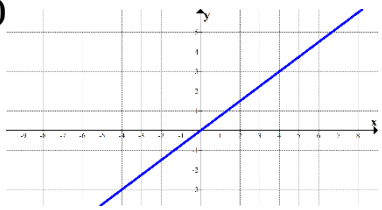
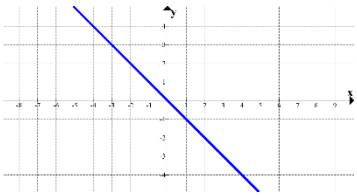
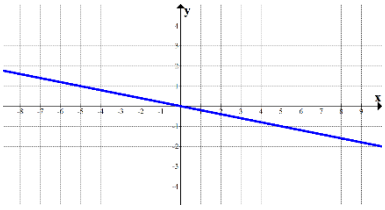
b) $y = -4x$ $y = -7x$ $y = \frac{-1}{3}x$ $y = \frac{-1}{5}x$

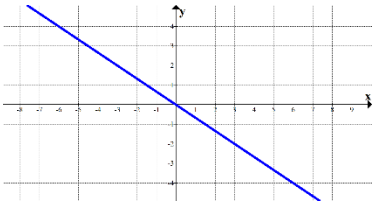
c) $y = 3x - 4$ $y = -5x - 1$ $y = \frac{-1}{2}x + 2$ $y = \frac{3}{4}x + 7$

d) $y = \frac{-5}{4}x - 3$ $y = -2x + 1$ $y = \frac{7}{2}x + 3$ $y = -4x - 5$

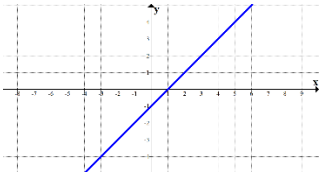
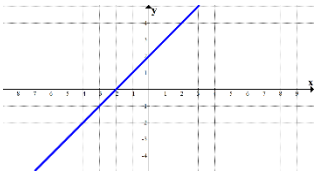
ANSWERS

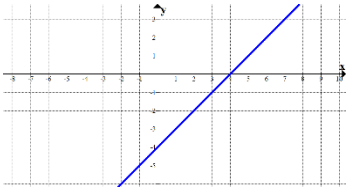
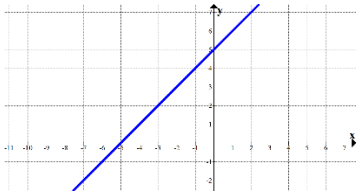
1. a)  **b)**  **c)** 

d)  **e)**  **f)** 

g) 

2. a) y=5x b) y=-5x c) y=-1/2x d) y=-3x e) y=-5/4x f) y=-5x

3. a)  **b)** 

c)  **d)** 

4. a) ii b) iii c) I d) iv **5. a) -1/3 b) 2 c) -1/5 d) 3/2 e) -7/5 f) -1**

6. a) $y = 5x, y = 3x, y = \frac{1}{2}x, y = \frac{1}{8}x$ **b)** $y = -7x, y = -4x, y = \frac{-1}{3}x, y = \frac{-1}{5}$

c) $y = -5x - 1, y = 3x - 4. y = \frac{3}{4}x + 7, y = \frac{-1}{2}x + 2$

d) $y = -4x - 5, y = \frac{7}{2}x + 3, y = -2x + 1, y = \frac{-5}{4}x - 3$