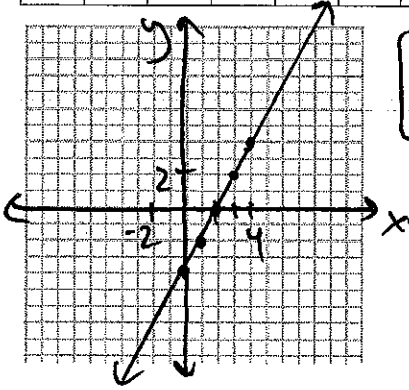


A2: Linear Functions Review

1. Create a graph and write a rule.

x	-1	0	1	2	3	4
y	-6	-4	-2	0	2	4



$$y = -4 + 2x$$

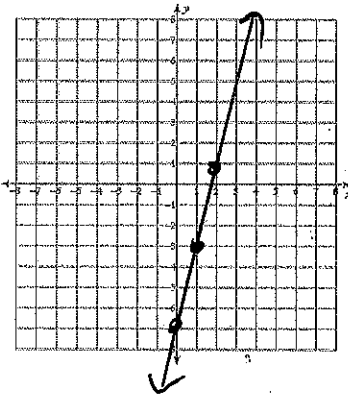
2. Write a rule for the following tables:

x	-2	-1	0	1
y	0	-3	-6	-9

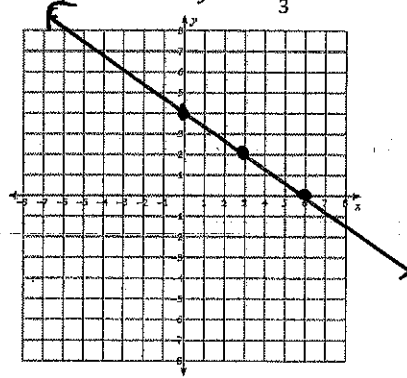
x	2	4	6	10
y	8	13	18	28

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

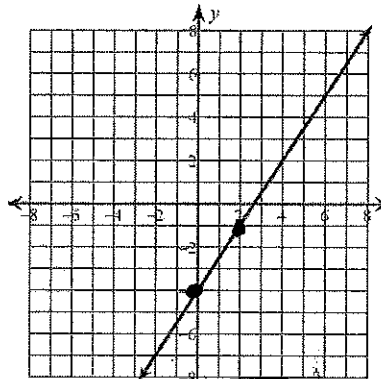
3. Graph the equation. $y = 4x - 7$



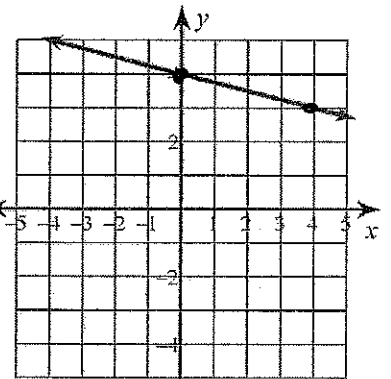
4. Graph the line $y = -\frac{2}{3}x + 4$



5. Write a rule for each graph.



$$y = -4 + \frac{3}{2}x$$



$$y = 4 - \frac{1}{4}x$$

6. Find the slope.

a. Between $(-6, -13)$ and $(10, 11)$.

$$m = \frac{11 - (-13)}{10 - (-6)} = \frac{11 + 13}{10 + 6} = \frac{24}{16}$$

$$m = \frac{3}{2}$$

b. Between $(9, 2)$ and $(-3, 10)$.

$$m = \frac{10 - 2}{-3 - 9} = \frac{8}{-12}$$

$$m = -\frac{2}{3}$$

8. A brand new print-to-shirt printer costs \$13,000. Sweatshirts cost \$7.35 each, and we sell them for \$40.

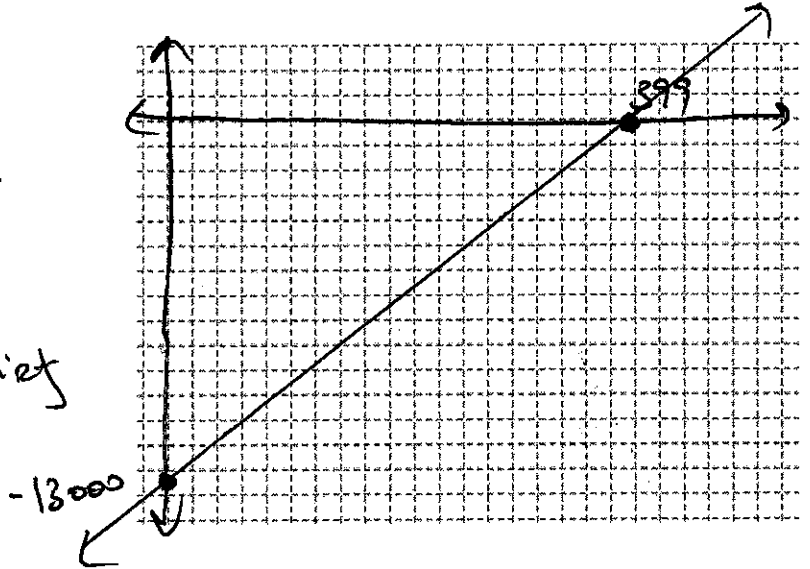
a. Write an equation that models this situation.

$$y = -13000 + 32.65x$$

c. Solve for the break-even point.

$$\frac{13000}{32.65} = 397 \text{ sweatshirts}$$

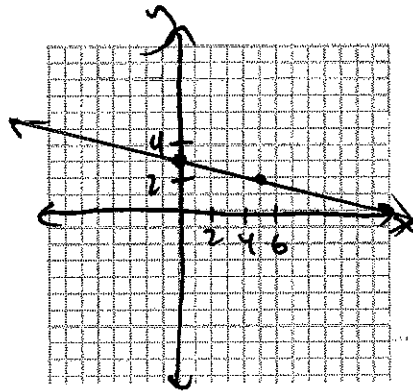
d. Create a graph of this situation.



9. **GRAPH** each line below then **WRITE** the equation of each line described below.

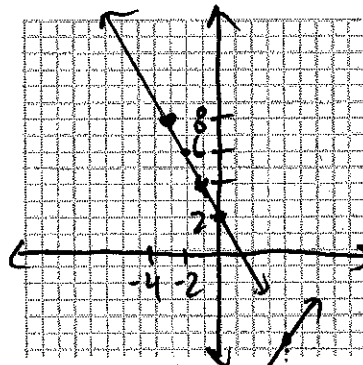
a. Slope is $-\frac{1}{5}$ and y-intercept is 3.

$$y = 3 - \frac{1}{5}x$$



b. Slope of -2 and goes through (-3, 8).

$$y = 2 - 2x$$



c. Goes through (-6, -13) and (10, 11).

$$y = -4 + \frac{3}{2}x$$

