

# Homework Questions??

Page 188  
Questions 3-12

3. Match each equation with a graph below.

a)  $y = 2x$

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

$x = 0$   
 $(0,0)$

(iii)

b)  $y = 4x$

Slope =  $\frac{4}{1}$

$x = 0$   
 $(0,0)$

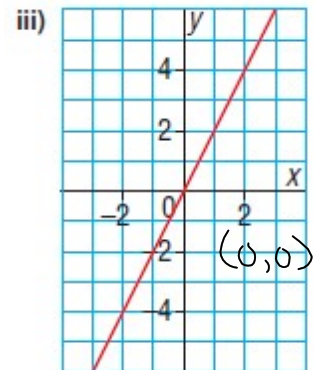
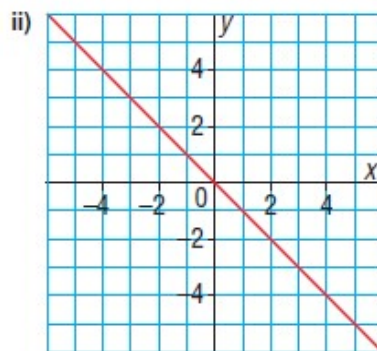
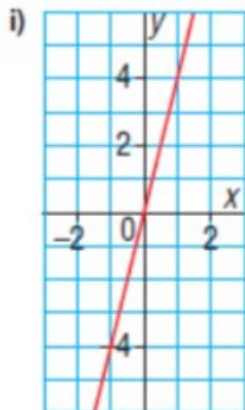
(i)

c)  $y = -x$

Slope =  $-\frac{1}{1}$

$x = 0$   
 $(0,0)$

(ii)



## Homework Solutions

3. Match each equation with a graph below.

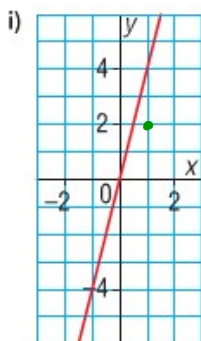
a)  $y = 2x$       b)  $y = 4x$       c)  $y = -x$

iii

$$y = 2(x)$$

x	y	
-2	-4	2(-2)
-1	-2	2(-1)
0	0	2(0)
1	2	2(1)
2	4	2(2)

Or  
Slope = 2  
 $x = 0$   
(0,0)

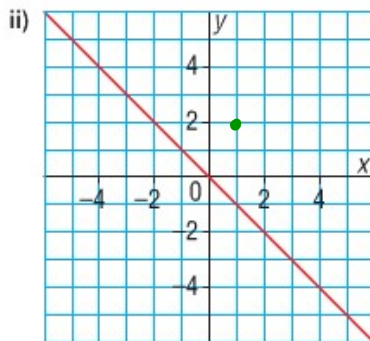


i

$$y = 4(x)$$

x	y	
-2	-8	4(-2)
-1	-4	4(-1)
0	0	4(0)
1	4	4(1)
2	8	4(2)

Or  
Slope = 4  
 $x = 0$   
(0,0)

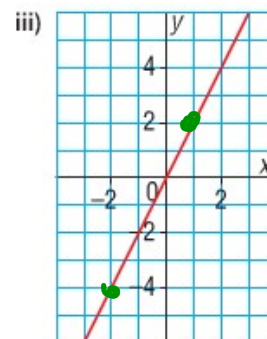


ii

$$y = -(x)$$

x	y	
-2	2	-(-2)
-1	1	-(-1)
0	0	-(0)
1	-1	-(1)
2	-2	-(2)

Or  
Slope = -1  
 $x = 0$   
(0,0)



4. Match each equation with a graph on the grid below.

a)  $y = 3x$

Slope =  $\frac{3}{1}$

$x = 0$   
(0,0)

(C)

b)  $y = 5x$

Slope =  $\frac{5}{1}$

$x = 0$   
(0,0)

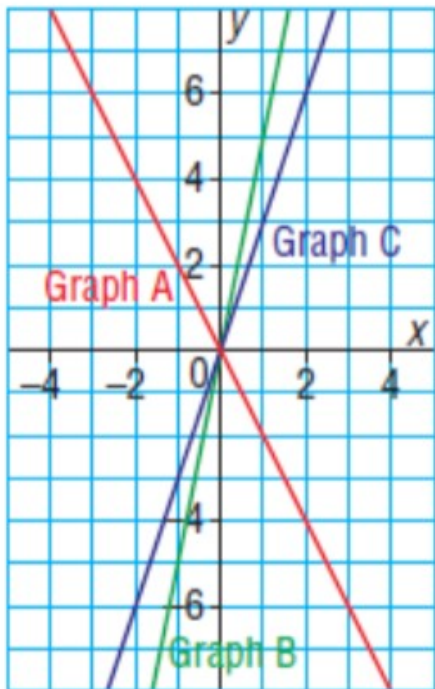
(B)

c)  $y = -2x$

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

$x = 0$   
(0,0)

(A)



5. Match each equation with a graph below.

Which strategy did you use?

a)  $y = 2x + 1$    b)  $y = 2x + 3$    c)  $y = 2x - 5$

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

$x = 0$   
(0,1)

(ii)

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

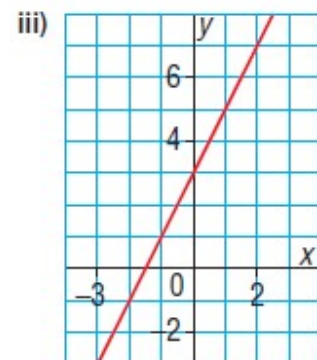
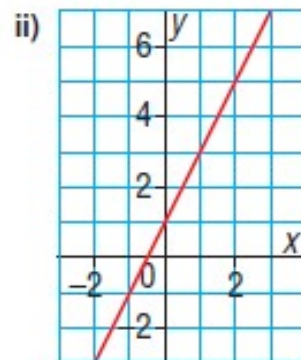
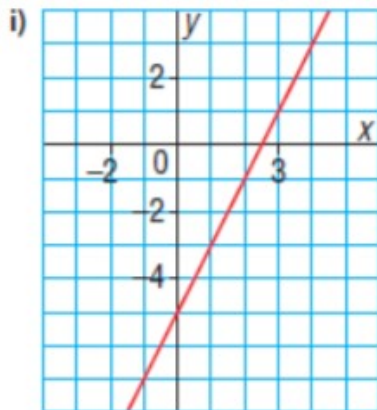
$x = 0$   
(0,3)

(iii)

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

$x = 0$   
(0,-5)

(i)



6. Match each equation with a graph below.

Justify your answers.

a)  $x + y = 4$     b)  $x - y = 4$     c)  $x - y = -4$

$$y = -x + 4$$

$$-y = -x + 4$$

$$y = x - 4$$

$$-y = -x - 4$$

$$y = x + 4$$

$$\text{Slope} = \frac{-1}{1}$$

$$x = 0$$
$$(0, 4)$$

(i)

$$\text{Slope} = \frac{1}{1}$$

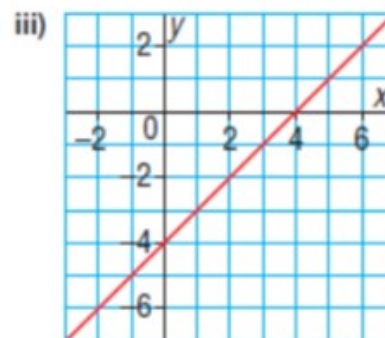
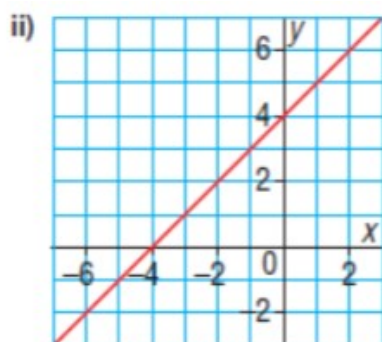
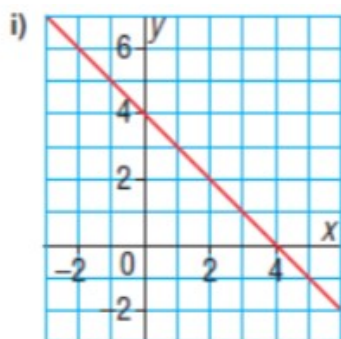
$$x = 0$$
$$(0, -4)$$

(iii)

$$\text{Slope} = \frac{1}{1}$$

$$x = 0$$
$$(0, 4)$$

(ii)



7. Match each equation with its graph below.

Explain your strategy.

a)  $y = 2x$

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

$x = 0$   
(0,0)

(B)

b)  $2y = 7$

$y = 7/2$

$y = 3.5$

Horizontal

(A)

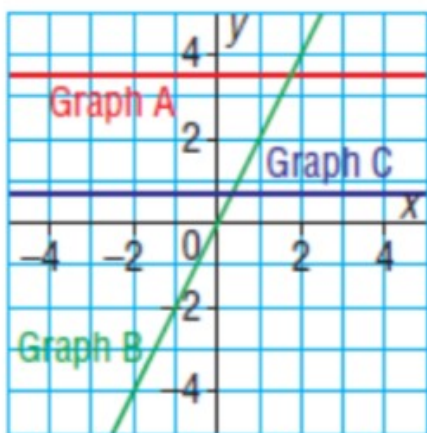
c)  $3y = 2$

$y = 3/2$

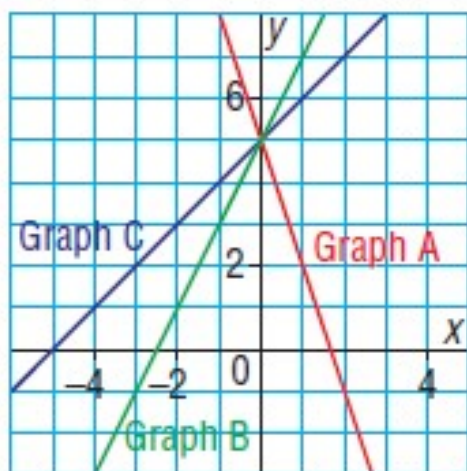
$y = 0.6666$

Horizontal

(C)



8. Which graph on this grid has equation  $y = 2x + 5$ ? Justify your answer.



$$y = 2x + 5$$

$$\text{Slope} = \frac{2}{1}$$

$$x = 0$$
$$(0, 5)$$

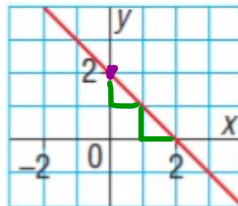
(B)



$$\text{Slope} = \frac{-1}{1}$$

$$x = 0$$

$$(0,2)$$



(iv)

$$y = -x + 2$$

9. Which equation describes each

Justify your answers.

a) i)  $y = 2x + 1$

$$\text{Slope} = \frac{2}{1}$$

$$x = 0$$

$$(0,1)$$

ii)  $y = 2$

Horizontal  
line

iii)  $y = x - 2$

$$\text{Slope} = \frac{1}{1}$$

$$x = 0$$

$$(0,-2)$$

iv)  $y = -x + 2$

$$\text{Slope} = \frac{-1}{1}$$

$$x = 0$$

$$(0,2)$$

b) i)  $x + 3y = 1$

$$3y = -x + 1$$

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

$$\text{Slope} = \frac{-1}{3}$$

$$x = 0 \\ (0, 1/3)$$

ii)  $3x - y = -3$

$$-y = -3x - 3$$

$$y = 3x + 3$$

$$\text{Slope} = \frac{3}{1}$$

$$x = 0 \\ (0, 3)$$

iii)  $3x + y = 1$

$$y = -3x + 1$$

$$\text{Slope} = \frac{-3}{1}$$

$$x = 0 \\ (0, 1)$$

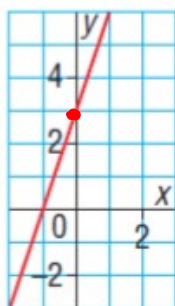
iv)  $3x - y = 3$

$$-y = -3x + 3$$

$$y = 3x - 3$$

$$\text{Slope} = \frac{3}{1}$$

$$x = 0 \\ (0, -3)$$



$$\text{Slope} = \frac{3}{1}$$

$$x = 0 \\ (0, 3)$$

(ii)

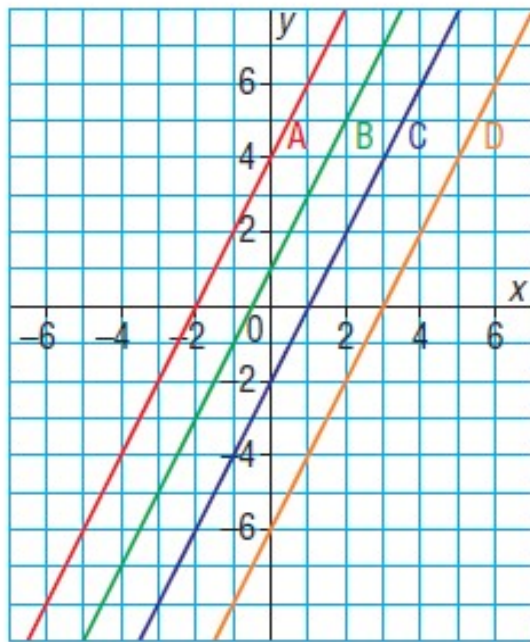
$$y = \frac{3}{1}x + 3$$

10. a) Write the equations of 3 different lines.  
b) Graph the lines on the same grid.  
Write the equations below the grid.  
c) Trade grids with a classmate. Match your  
classmates' graphs and equations.

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**11. Assessment Focus**

a) How are these 4 graphs alike?



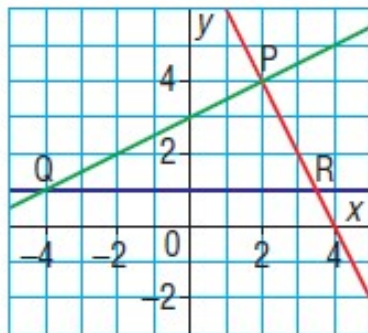
- d) Did you use the same strategy each time?  
If your answer is yes, what strategy did you use and why?  
If your answer is no, explain why you used different strategies.  
Show your work.

b) How are the graphs different?

c) Match each graph to its equation.

- i)  $y = 2x - 2$
- ii)  $y = 2x + 4$
- iii)  $2x - y = 6$
- iv)  $2x - y = -1$

12. The lines on the grid below intersect to form  $\triangle PQR$ . The equations of the lines are:  
 $y = 1$ ,  $2x + y = 8$ , and  $2y - x = 6$



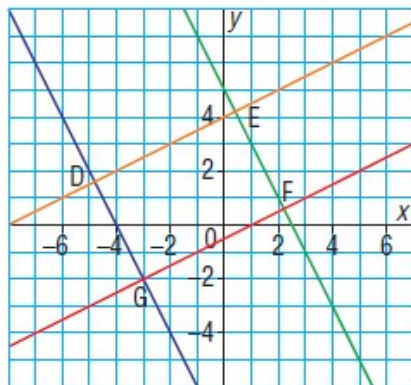
$y = 1$   
QR

What is the equation of the line on which each side of the triangle lies?

- a) PQ      b) QR      c) RP

13. The lines on the grid below intersect to form rectangle DEFG.

The equations of the lines are:  $y = \frac{1}{2}x - \frac{1}{2}$ ;  
 $y = -2x + 5$ ;  $y = -2x - 8$ ; and  $x - 2y = -8$



What is the equation of the line on which each side of the rectangle lies?

- a) DE      b) DG      c) EF      d) FG