

Educators workbook

Pre-and post-test:

Create 2x tests on the following topics:

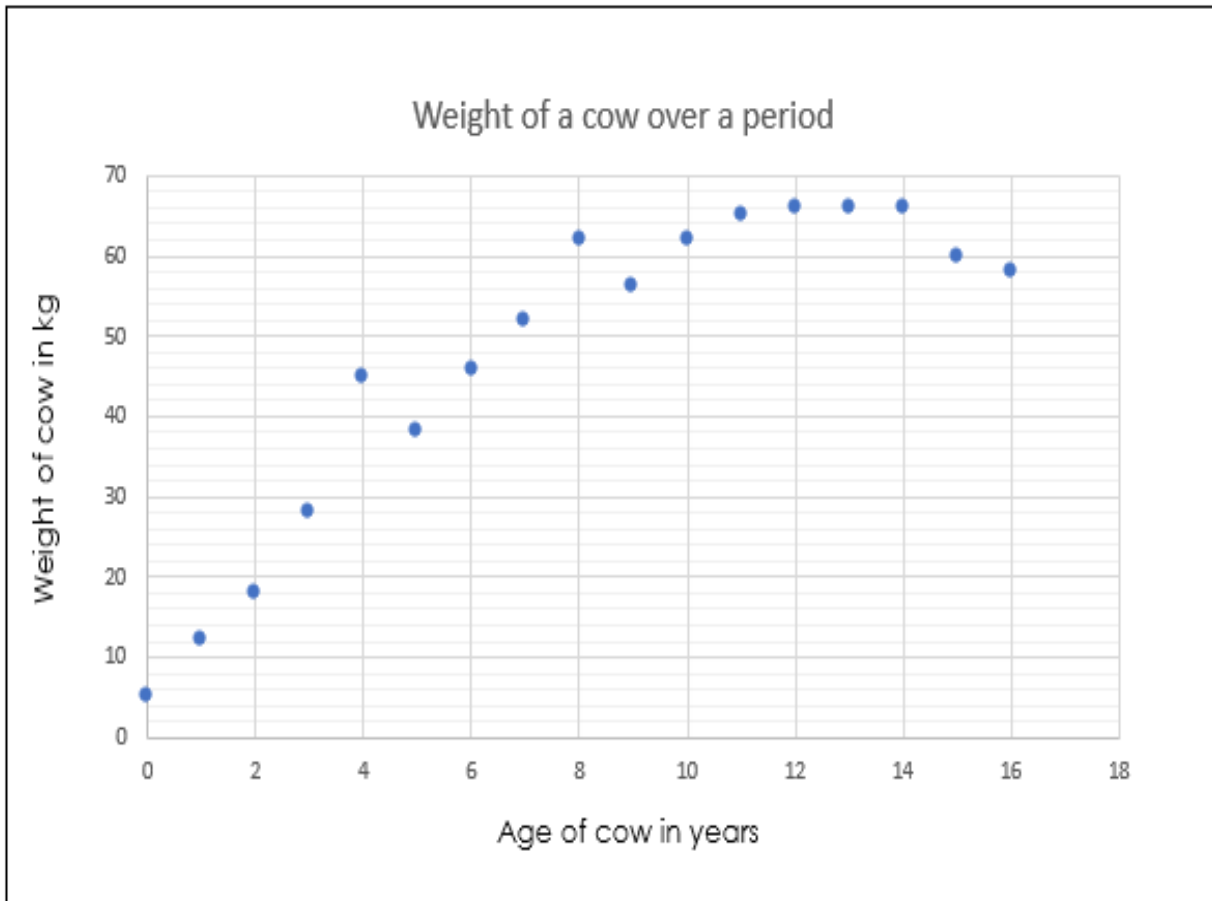
Test 1:

- Global graphs (5)
- Plotting of co-ordinates (5)
- Drawing of a straight-line graph (10)

Test 2:

- Drawing of a straight-line graph using the dual intercept method. (6)
- Finding the gradient (6)
- Finding the equation (4)
- Parallel and perpendicular graphs (4)

Global graphs:



Question 2:

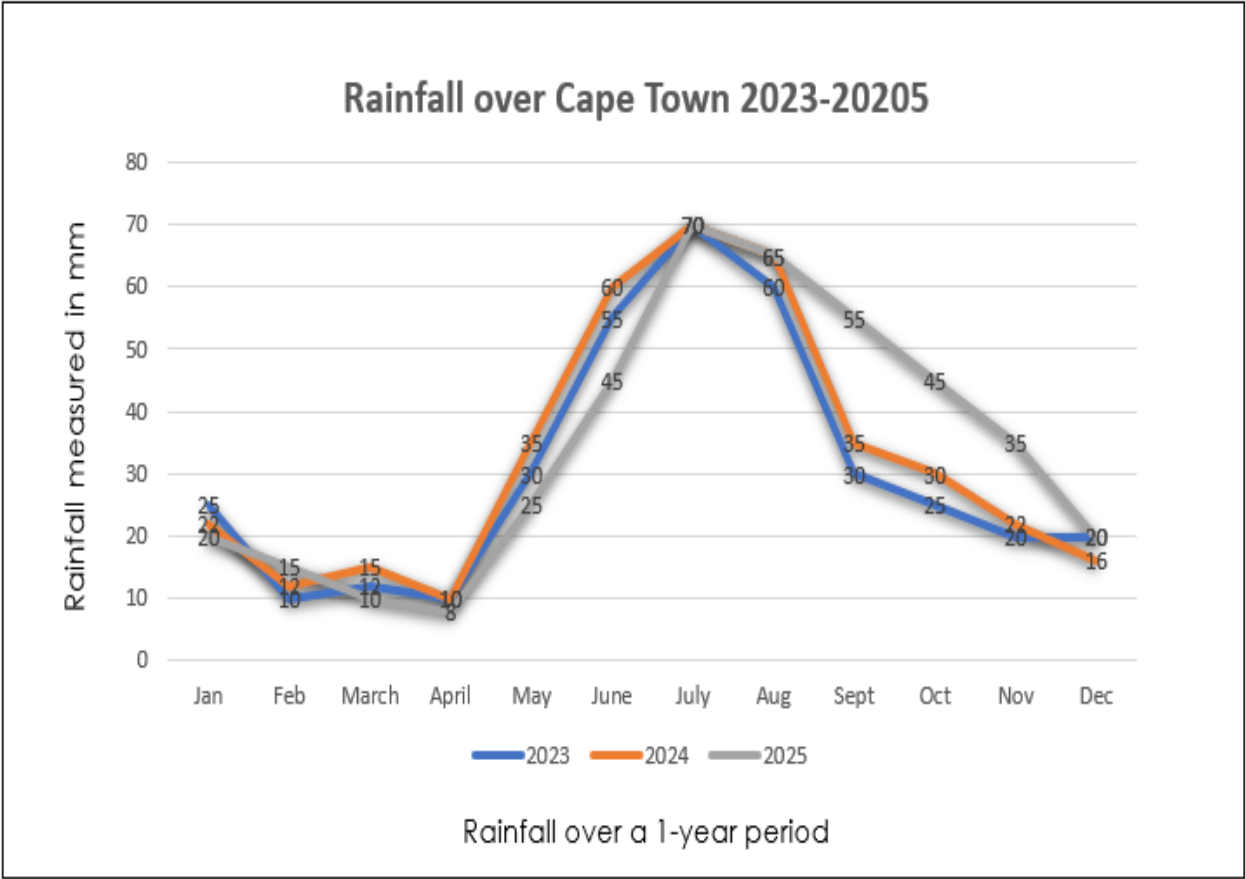
2.1)

2.2)

2.3)

2.4)

2.5)



Question 3:

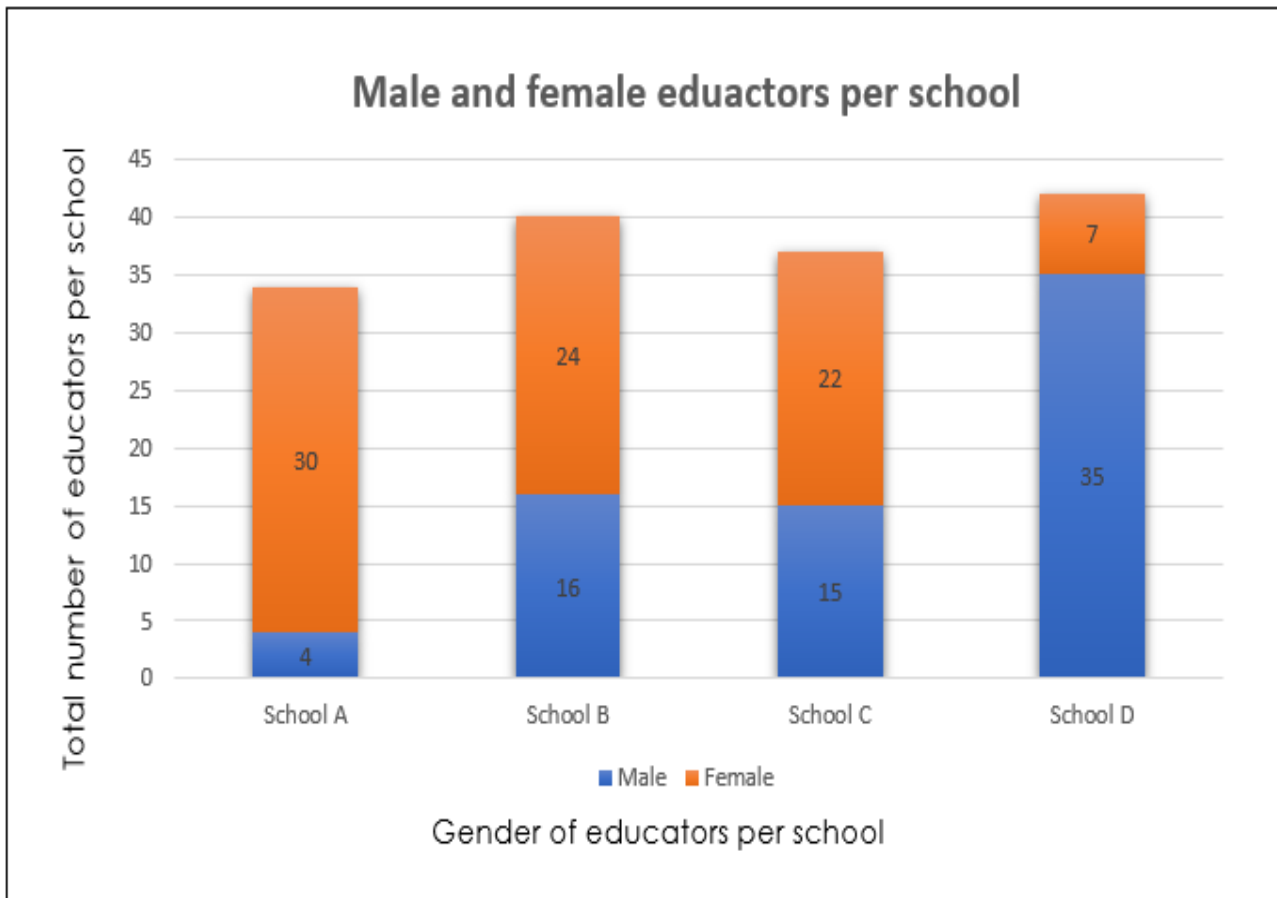
3.1)

3.2)

3.3)

3.4)

3.5)



Question 4:

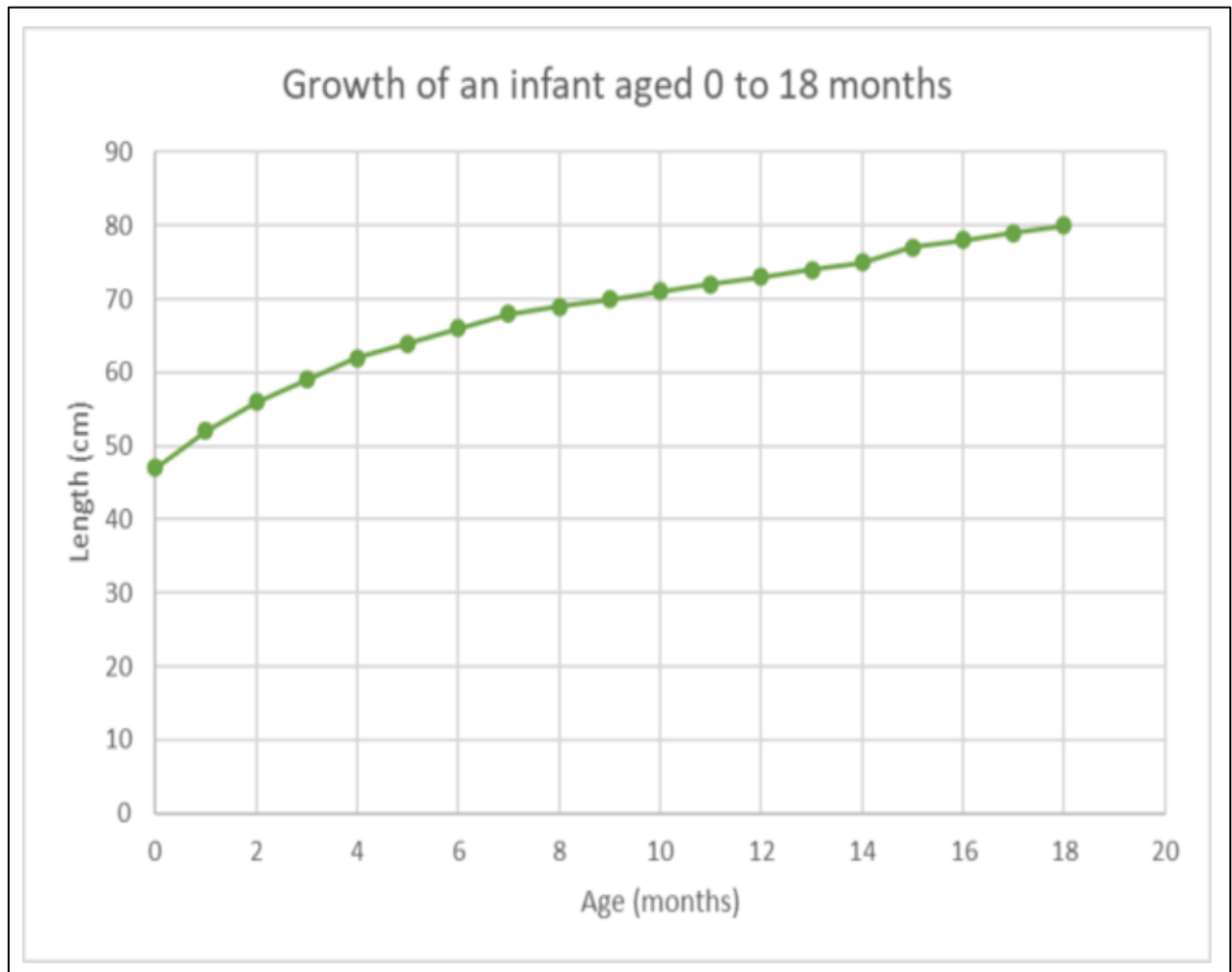
4.1)

4.2)

4.3)

4.4)

4.5)



Question 5:

5.1)

5.2)

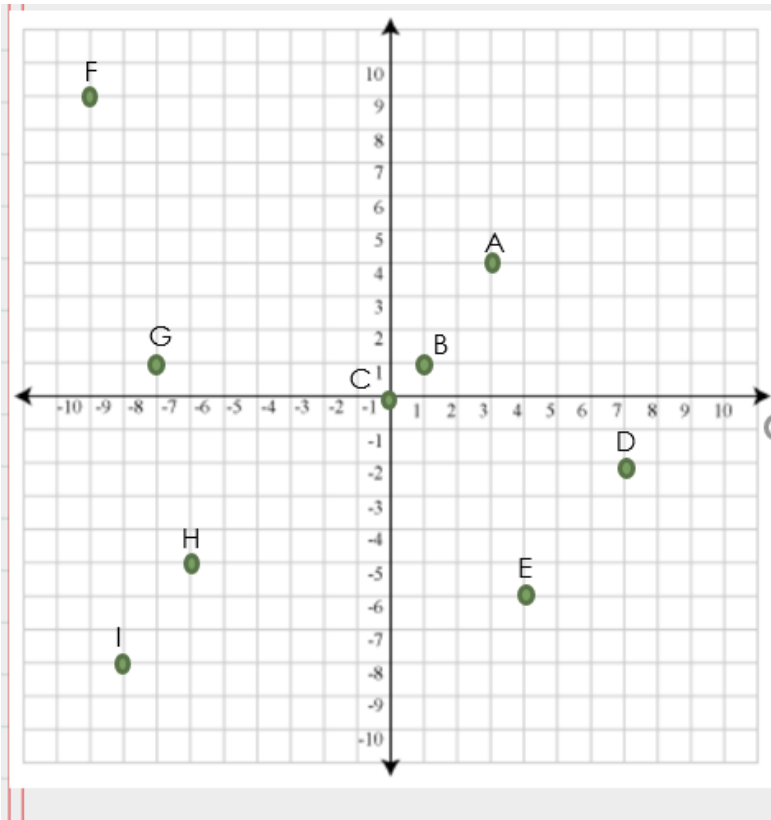
5.3)

5.4)

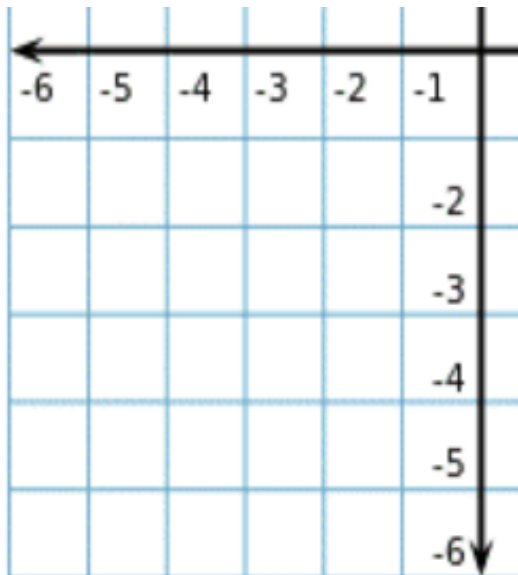
5.5)

Plotting of co-ordinates:

Plot the following co-ordinates:

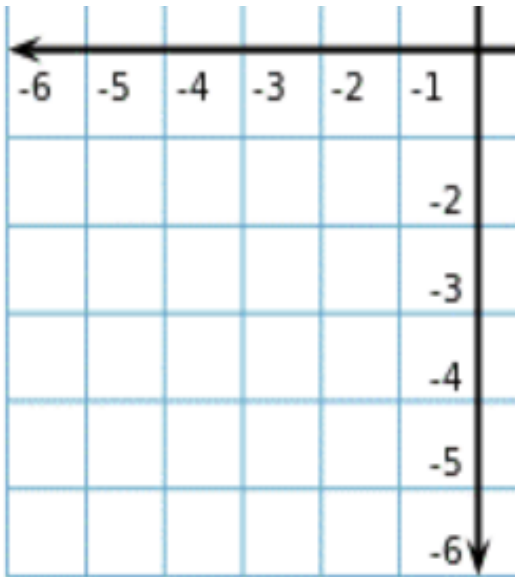


- A)
- B)
- C)
- D)
- E)
- F)
- G)
- H)
- I)



Plot the following co-ordinates:

- 2.1)
- 2.2)
- 2.3)
- 2.4)
- 2.5)



Plot the following co-ordinates:

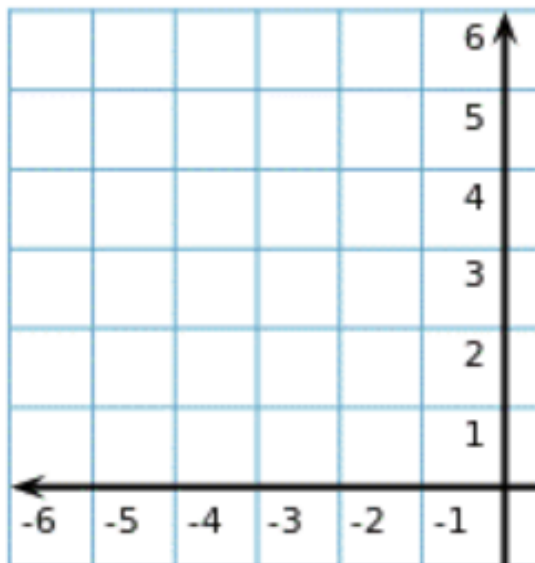
3.1)

3.2)

3.3)

3.4)

3.5)



Plot the following co-ordinates:

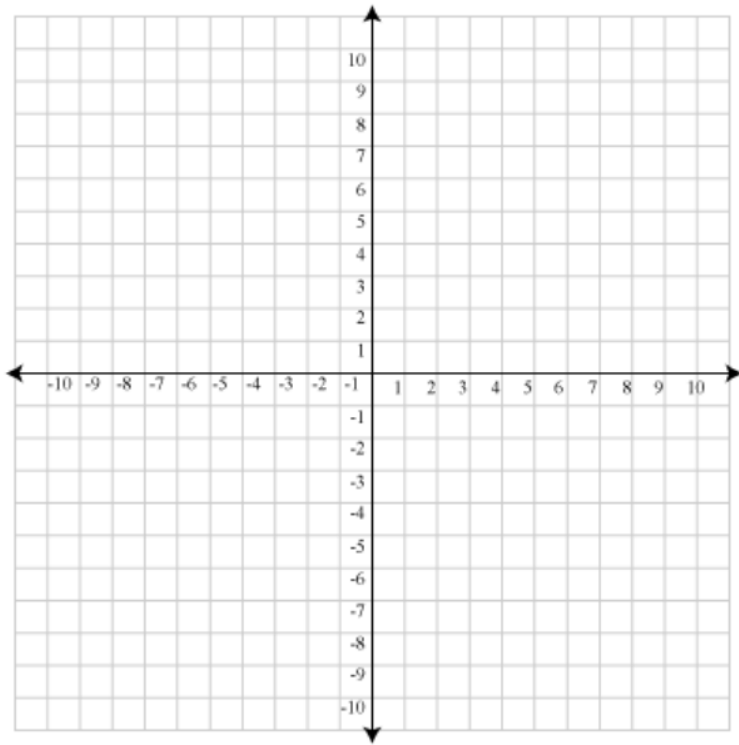
4.1)

4.2)

4.3)

4.4)

4.5)



Plot the following co-ordinates:

5.1)

5.2)

5.3)

5.4)

5.5)

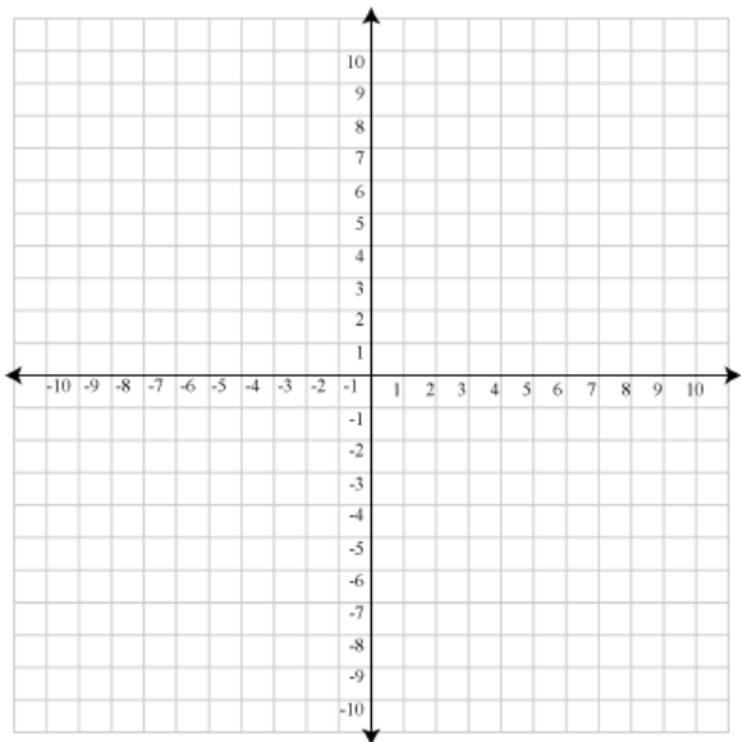
5.5)

5.6)

5.7)

5.8)

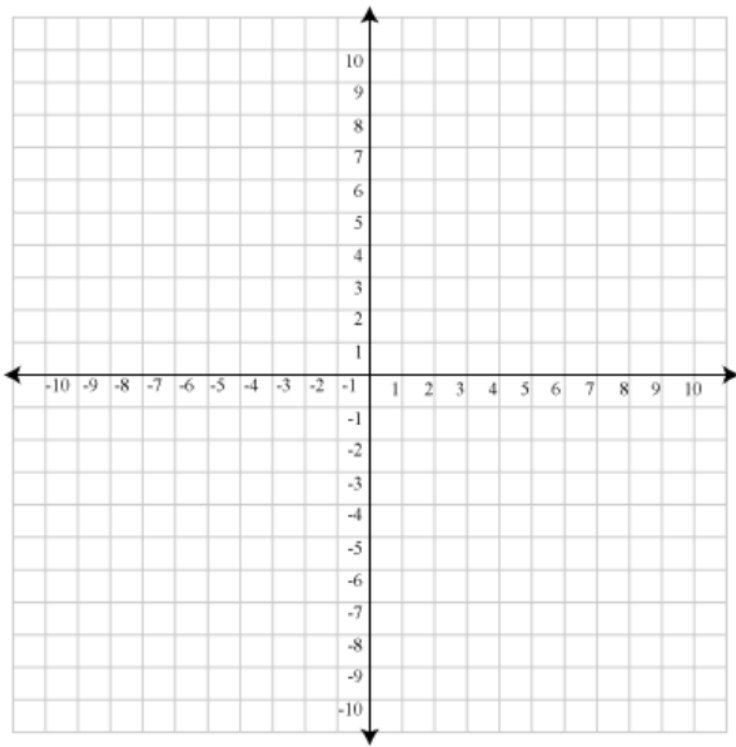
Drawing of graph



*Gradient with a negative whole number

$y =$

x	-2	-1	0	1	2
y					



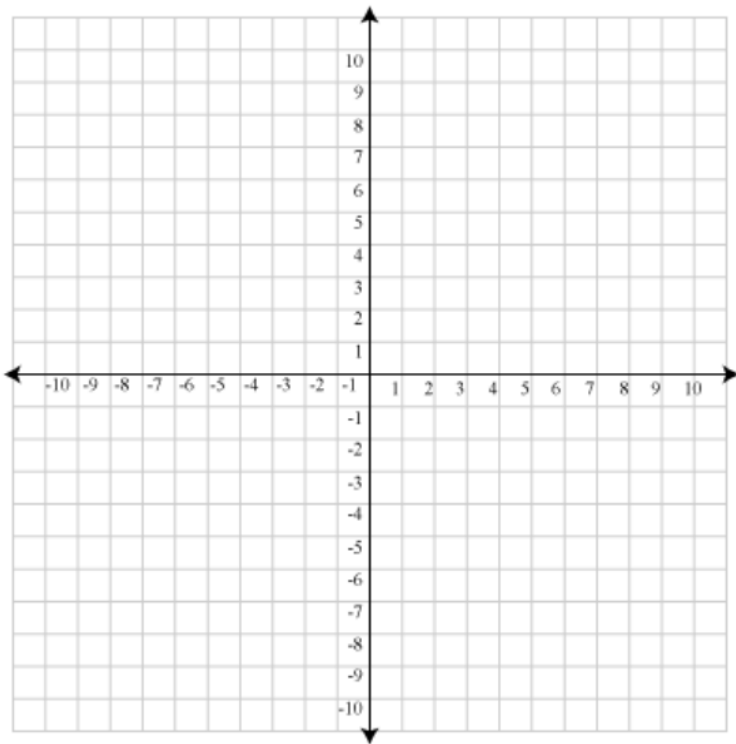
*Gradient with a positive fraction

$$y =$$

x	-2	-1	0	1	2
y					

*Gradient with a positive fraction

$$y =$$

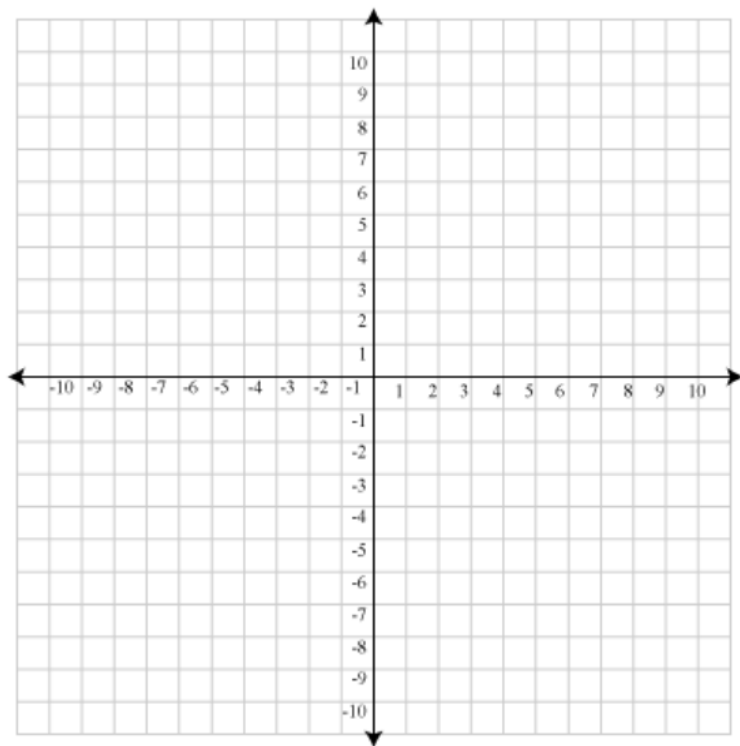


*Gradient with a negative fraction

$$y =$$

x	-2	-1	0	1	2
y					

Drawing of graph

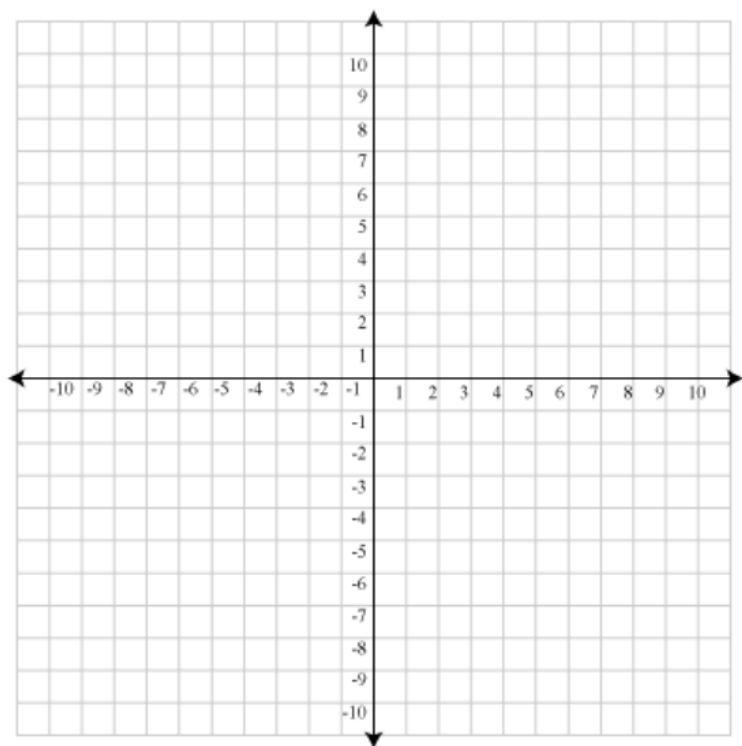


$$y = 3x - 2$$

x	-2	-1	0	1	2
y					

$$y = 3x + 1$$

x	-2	-1	0	1	2
y					



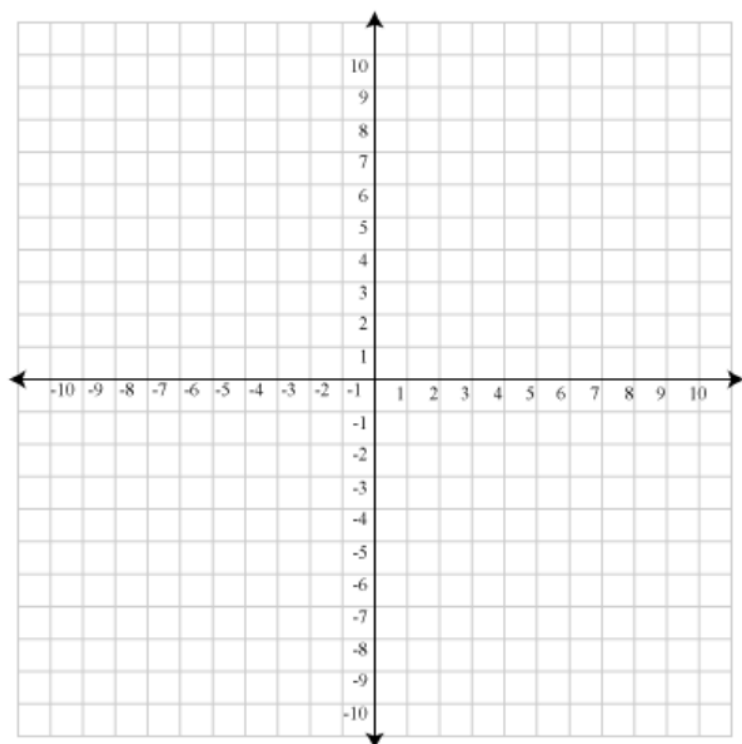
$$y = -2x + 1$$

x	-2	-1	0	1	2
y					

$$y = -2x - 1$$

x	-2	-1	0	1	2
y					

3x Straight line graphs with **positive** gradients (and fractions)



$y =$

x	-2	-1	0	1	2
y					

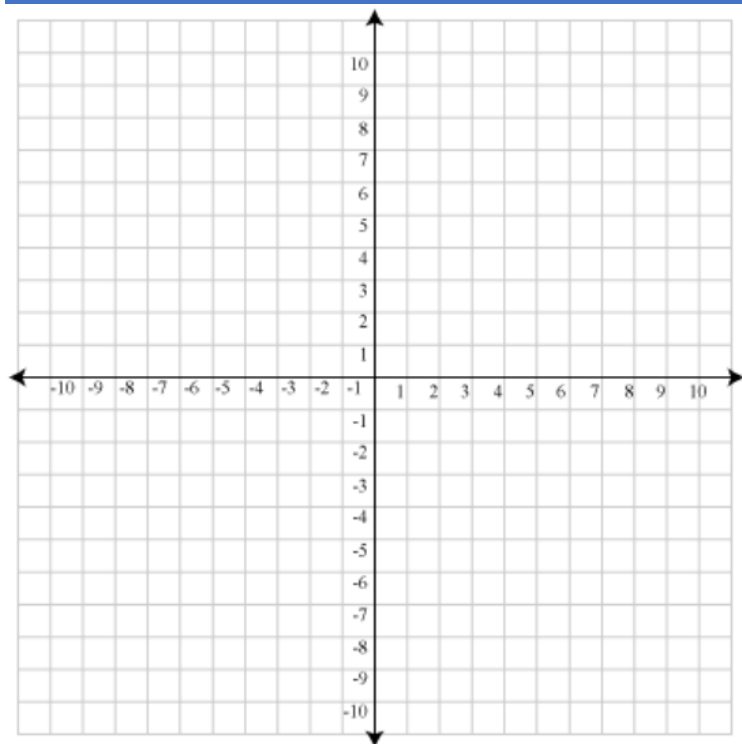
$y =$

x	-2	-1	0	1	2
y					

$y =$

x	-2	-1	0	1	2
y					

3x Straight line graphs with **negative** gradients (and fractions)



$y =$

x	-2	-1	0	1	2
y					

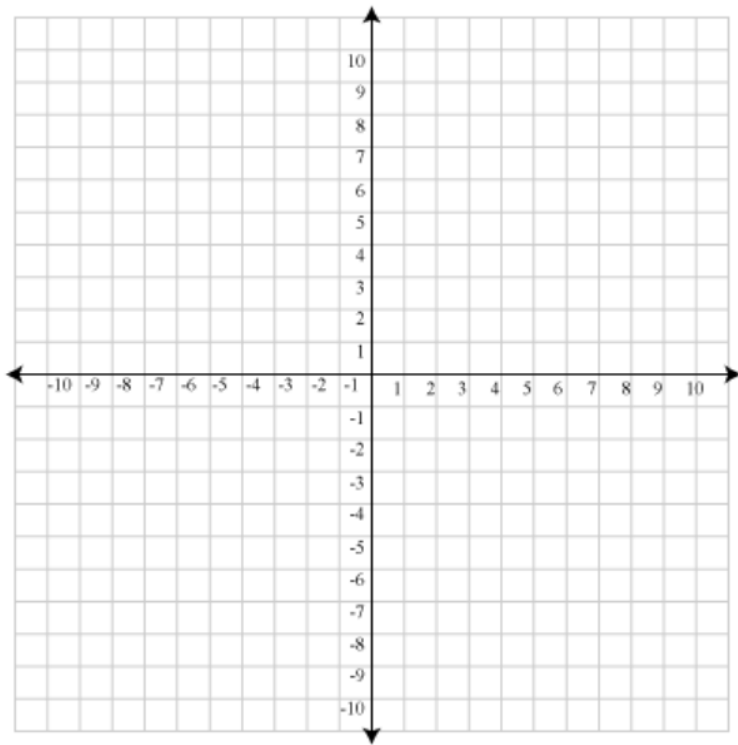
$y =$

x	-2	-1	0	1	2
y					

$y =$

x	-2	-1	0	1	2
y					

Drawing of graph without x/y intercept



$y =$

x	-2	-1	0	1	2
y					

$x =$

x	-2	-1	0	1	2
y					

$y =$

x	-2	-1	0	1	2
y					

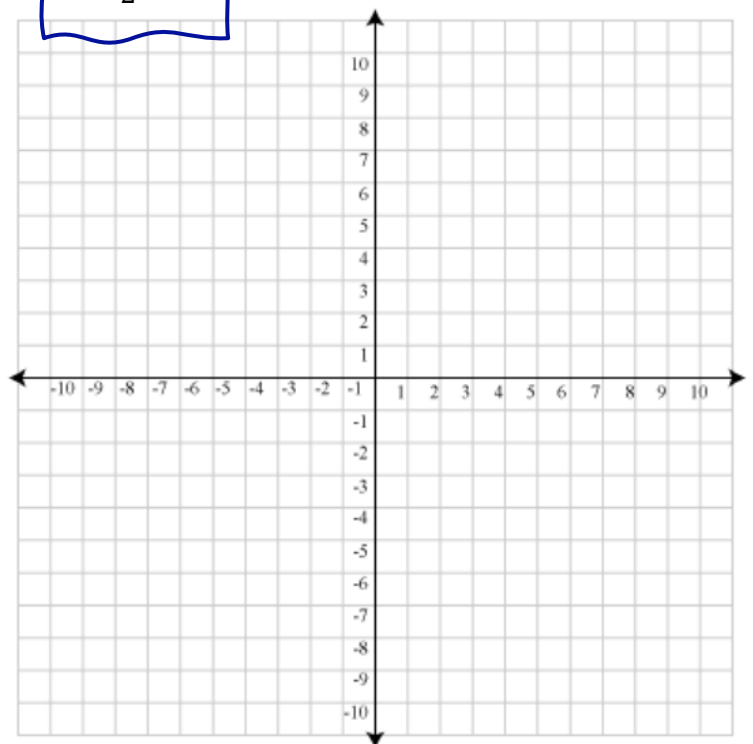
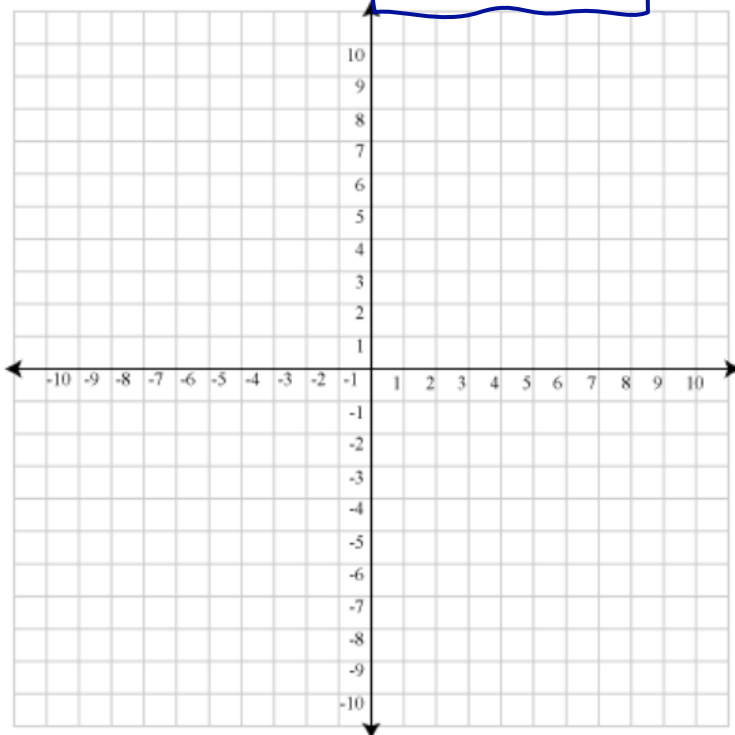
Dual intercept method Finding the:

x-intercept

y-intercept

$$y = -2x + 6$$

$$y = \frac{1}{2}x - 4$$



Activity:

Draw the following graphs by using the dual intercept method.

$$y =$$

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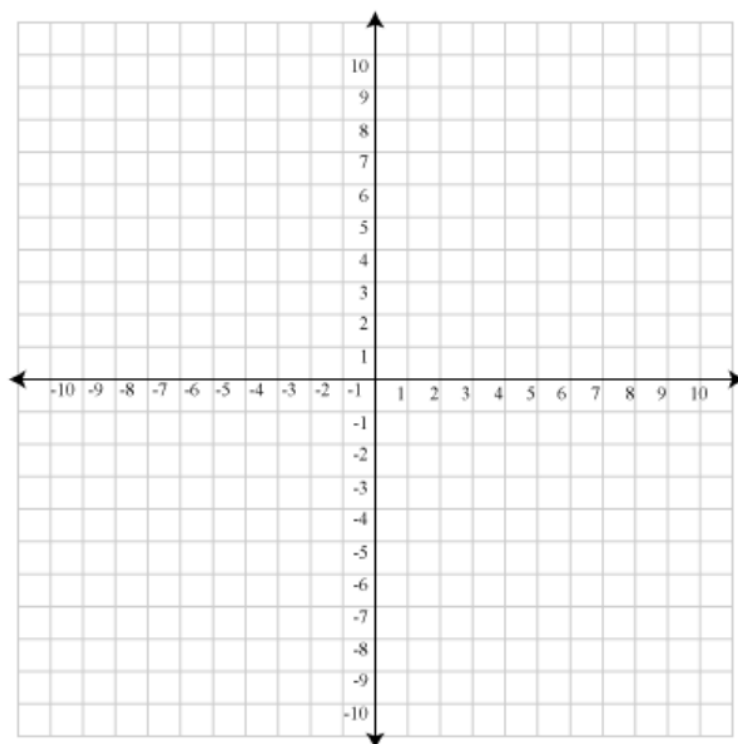
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$$y =$$

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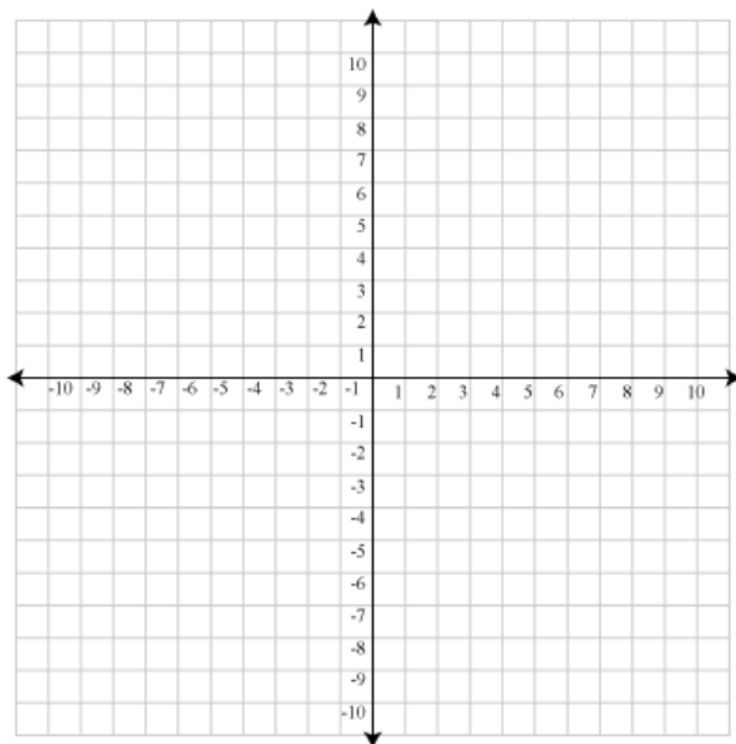
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Activity:

Draw the following graphs by using the dual intercept method.

$$y =$$

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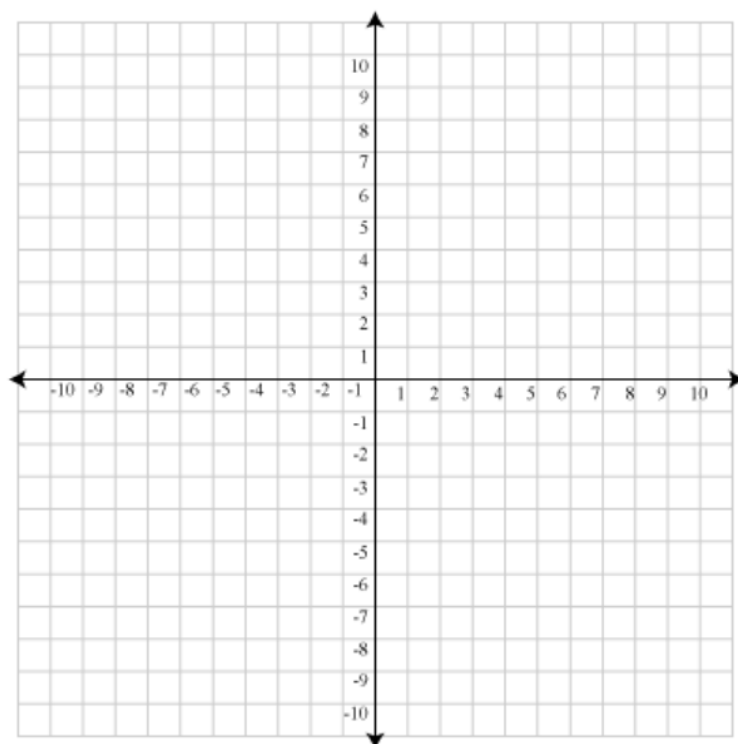
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$$y =$$

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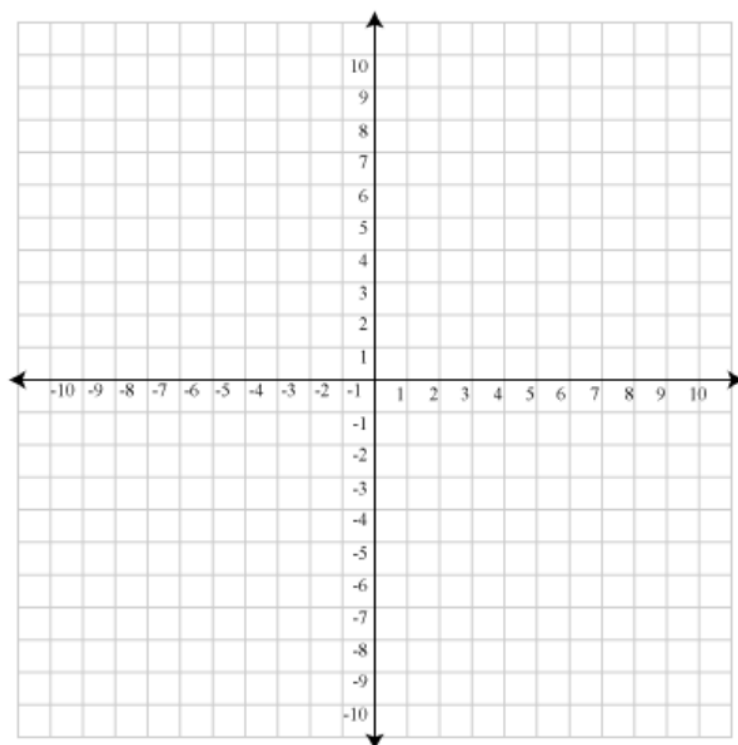
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Activity:

Draw the following graphs by using the dual intercept method.

$$y =$$

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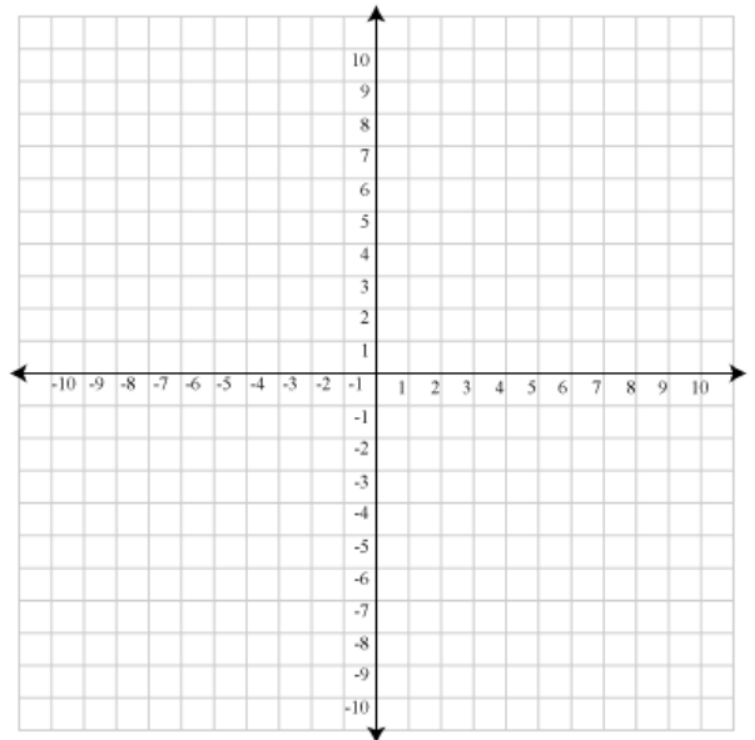
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Determine the gradient of the following linear graphs:

A: (2; 9) and B: (4; 17)

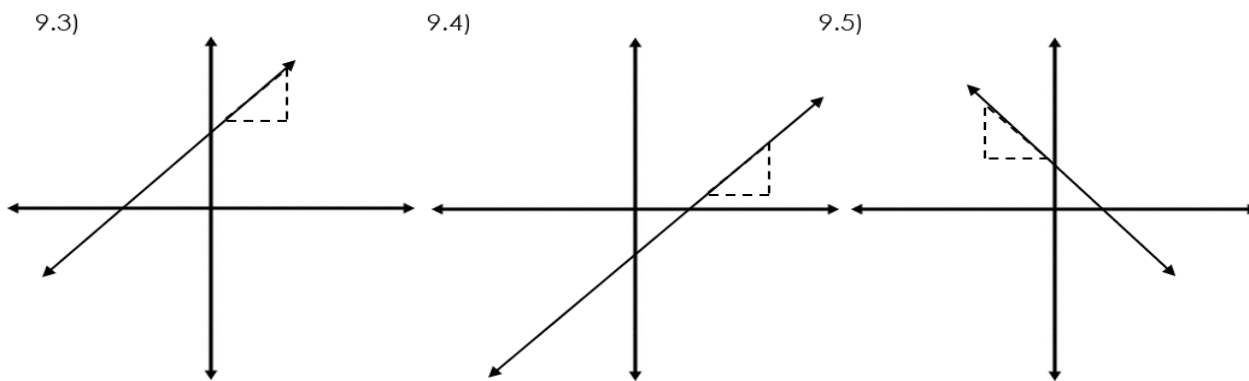
C: (−4; − 7) and D: (2; 5)

E: (−1; − 4) and F: (3; − 8)

$G:(\ ; \)$ and $H:(\ ; \)$

$I:(\ ; \)$ and $J:(\ ; \)$

$K:(\ ; \)$ and $L:(\ ; \)$



Determining the equation by using gradient and one co-ordinate.

$A: (2; 9)$ and $B: (4; 17)$

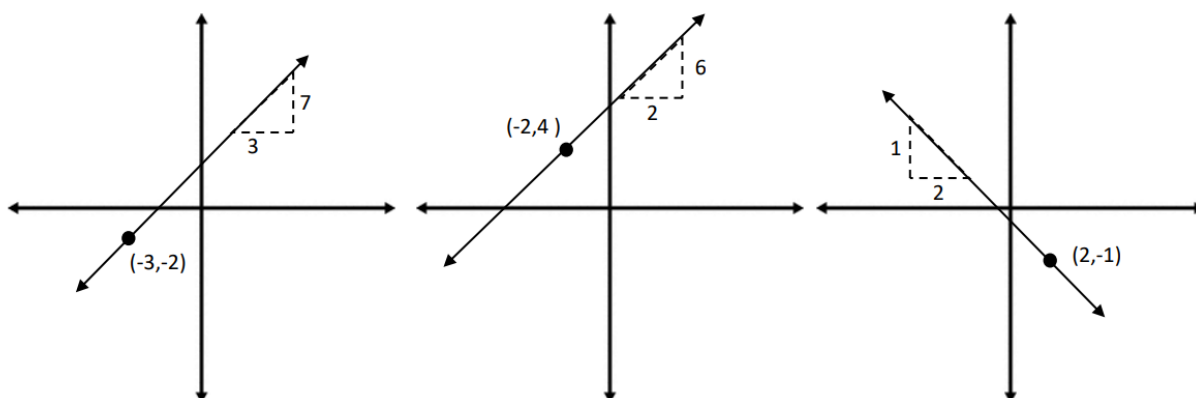
$C: (-4; -7)$ and $D: (2; 5)$

$E: (-1; -4)$ and $F: (3; -8)$

$G: (\quad ; \quad)$ and $H: (\quad ; \quad)$

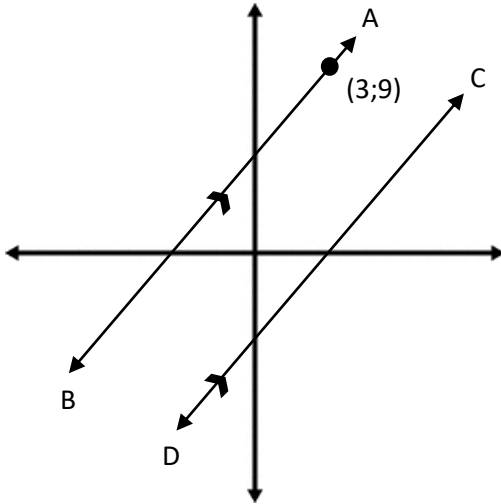
$I: (\quad ; \quad)$ and $J: (\quad ; \quad)$

$K: (\quad ; \quad)$ and $L: (\quad ; \quad)$



Parallel and perpendicular

Parallel Graphs- have the **SAME** gradient, $\therefore m_1 = m_2$



Gradient of CD: $m = 2$

Determine the equation of AB, if $AB \parallel CD$

$$\therefore y = 2x + c \quad \text{Sub : } (3;9)$$

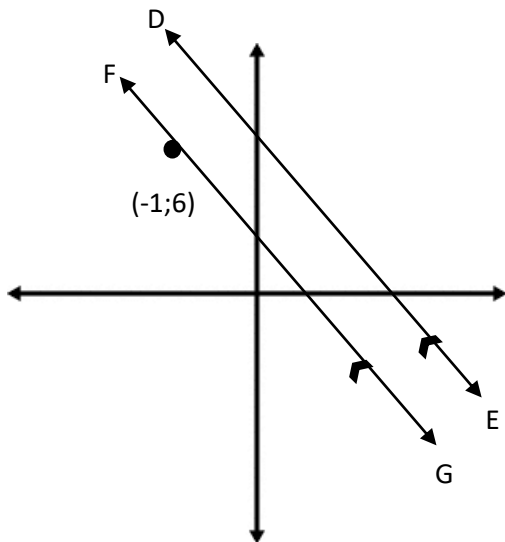
$$\therefore (9) = 2(3) + c$$

$$\therefore 9 = 6 + c$$

$$\therefore 9 - 6 = c$$

$$\therefore 3 = c$$

$$\therefore y = 2x + 3$$



Gradient of DE: $m = -4$

Determine the equation of FG if $DE \parallel FG$:

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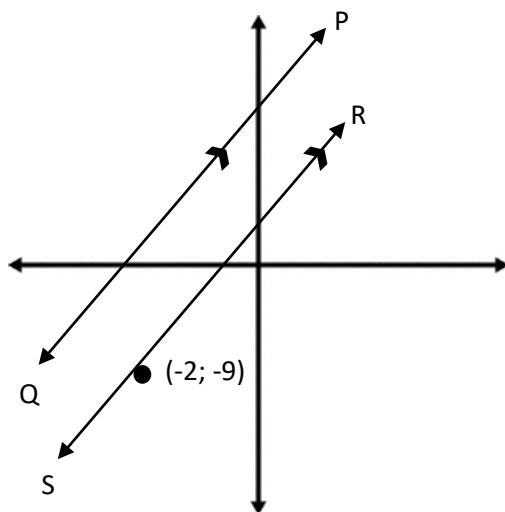
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Gradient of PQ: $m = 5$

Determine the equation of RS if $PQ \parallel RS$:

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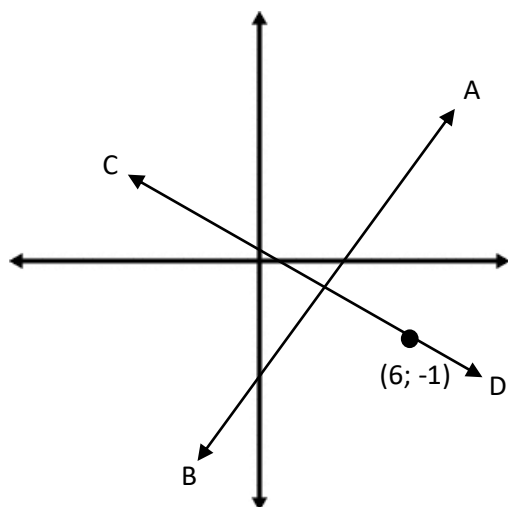
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Parallel Graphs- have the **SAME** gradient, $\therefore m_1 \times m_2 = -1$



Gradient of AB: $m = 3$

Determine the equation of CD, if $AB \perp CD$

$$3 \times m_2 = -1$$

$$m_2 = -1 \div 3$$

$$m_2 = -\frac{1}{3}$$

$$\therefore y = -\frac{1}{3}x + c \quad \text{Sub : } (6, -1)$$

$$\therefore (-1) = -\frac{1}{3}(6) + c$$

$$\therefore -1 = -2 + c$$

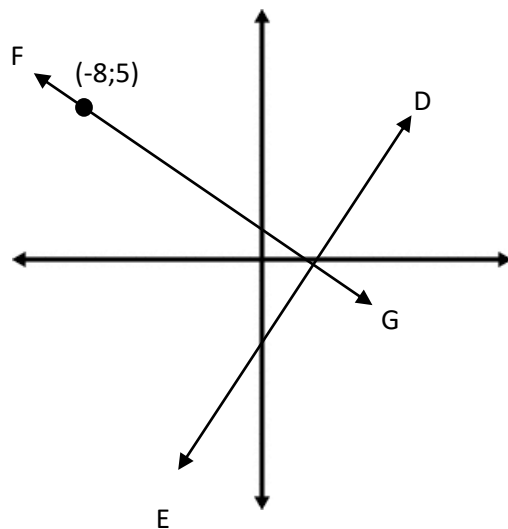
$$\therefore -1 + 2 = c$$

$$\therefore 1 = c$$

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

Gradient of DE: $m = 4$

Determine the equation of FG if $DE \perp FG$:



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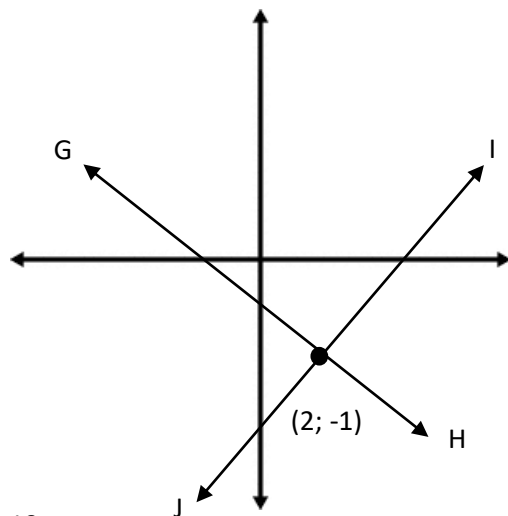
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Gradient of GH: $m = -\frac{1}{2}$

Determine the equation of IJ if $GH \perp IJ$:



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