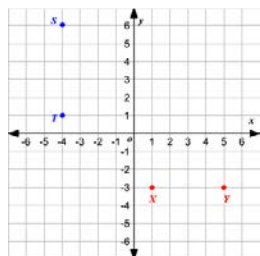




**Topic: Straight line graphs and gradient of parallel lines**

**Starter**

Write the following in the form of (x,y):



S =                      X =

T =                      Y =

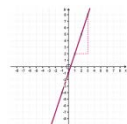
**Top Tips!**

$x = a$  Vertical lines

$y = b$  Horizontal lines

$y = ax + b$  Need to complete a table of values before you draw the graph

Gradient of a straight line =  $\frac{\text{change in } y}{\text{change in } x}$

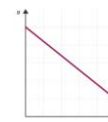


Gradient =  $6 \div 2 = 3$

Positive gradient



Negative gradient

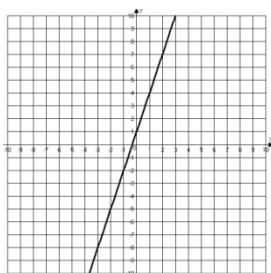


$y = mx + c$ ,  $m$  is the gradient of the line,  $c$  is the intercept of the line on the  $y$  axis

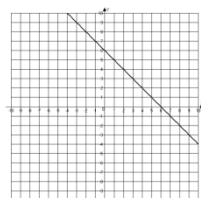
Lines which are parallel have the **same gradient!**

**Skills:**

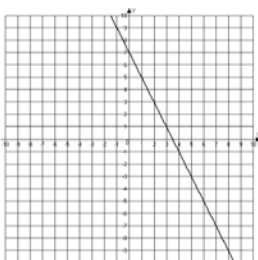
1. What is the gradient of this line?



2. Positive or negative gradient?

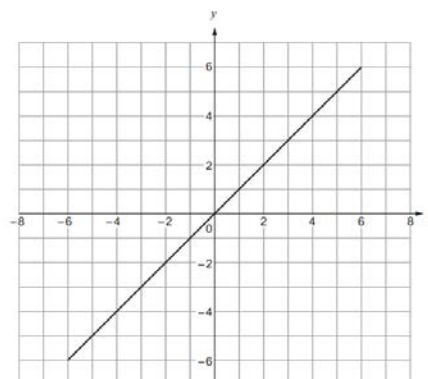


3. What is the equation of this line?



**Examination Question: 2014 Summer Link Methods U1 Higher Q13**

The graph of the equation  $y = x$  is shown on the axes below.



**Explain** how you would use the graph of  $y = x$  to draw the graphs of the following equations.

(a)  $y = x + 3$

[1]

(b)  $y = -x$

[1]

**Assessment for Learning**

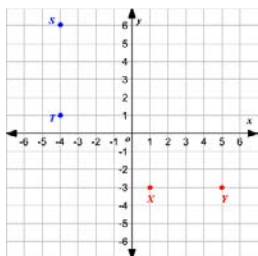
**Video / QR code**



**Topic: Straight line graphs and gradient of parallel lines**

**Starter**

Write the following in the form of (x,y):



S = (-4,6) X = (1,-3)

T = (-4,1) Y = (5,-3)

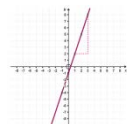
**Top Tips!**

$x = a$  Vertical lines

$y = b$  Horizontal lines

$y = ax + b$  Need to complete a table of values before you draw the graph

Gradient of a straight line =  $\frac{\text{change in } y}{\text{change in } x}$

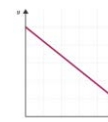


Gradient =  $6 \div 2 = 3$

Positive gradient



Negative gradient

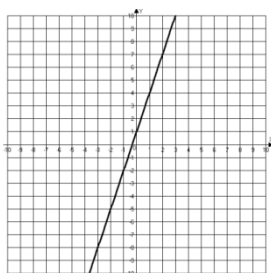


$y = mx + c$ ,  $m$  is the gradient of the line,  $c$  is the intercept of the line on the  $y$  axis

Lines which are parallel have the **same gradient!**

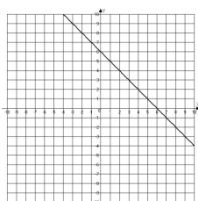
**Skills:**

1. What is the gradient of this line?



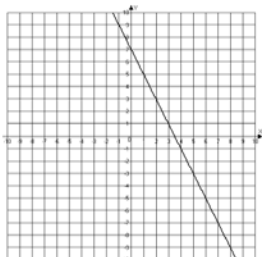
3

2. Positive or negative gradient?



Negative

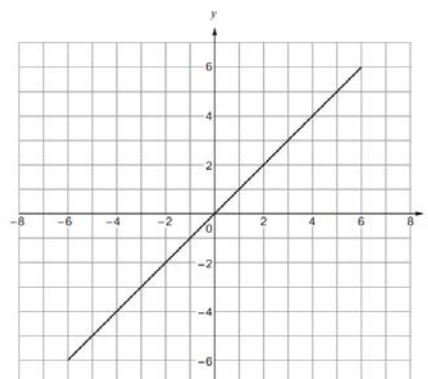
3. What is the equation of this line?



$y = -2x + 7$

**Examination Question: 2014 Summer Link Methods U1 Higher Q13**

The graph of the equation  $y = x$  is shown on the axes below.



**Explain** how you would use the graph of  $y = x$  to draw the graphs of the following equations.

(a)  $y = x + 3$

Explains parallel with intersection,  $y$ -axis at 3, e.g. 'same gradient with intersection at ( $y=3$ )'

[1]

(b)  $y = -x$

Reflection (in  $x$ -axis) or perpendicular (through the origin)

[1]

**Assessment for Learning**

**Video / QR code**