The solutions of $2x + y = 5$ are the coordinates of all the points on the straight line. This is why we call the equation a linear equation. The line is called the **graph** of the equation.

Note that we can rewrite the equation $2x + y = 5$ as

$$y = -2x + 5,$$

which is an equation of a linear graph that we have learnt in Secondary 1! We can use the skill learnt before to draw the graph.
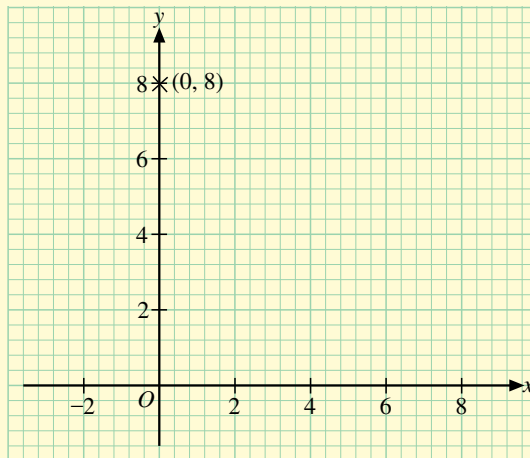
Class Activity 1

Questions

1. Consider the linear equation in two unknowns $x + y = 8$.

   (a) Copy and complete the following table of solutions of the equation.
   $x + y = 8$

x	0	2	4	
y	8			1

   (b) On a sheet of graph paper, plot the points found in (a) using the scale for both axes as shown below and draw the graph of $x + y = 8$.

   (c) Reading from your graph, what is the value of k if $(3, k)$ is a solution of $x + y = 8$?

   (d) Reading from your graph, what is the value of q if $\left(2\frac{1}{3}, q\right)$ is another solution of $x + y = 8$?

   (e) What should the exact value of q be?

   (f) Can you read the exact value of q from your graph?