



Linear Graphs

- **Objectives:** by the end of the lesson, students should be able to:
 - generate coordinate pairs that satisfy a simple linear rule
 - plot the graphs given explicitly in terms of x .
- **Success Criteria:** students should be able to generate coordinate pairs from E.g.: $y = 2x$
- **Keywords:** substitute, intercept, gradient, origin,
 - parallel



Linear Graphs

- Linear graphs are straight lines
- The rule connecting x and y coordinates is of the form $y = mx + c$
- ‘ m ’ is the gradient : how flat or how steep the graph should be
- ‘ c ’ is the intercept: where the graph crosses the y -axis
- The meeting points of the x - axis and y – axis is called the origin

Linear Graphs

1) Let us start with simple rule,

$$y = x$$

x	0	1	2	3
y	0	1	2	3

2) Now let's $y = x + 2$

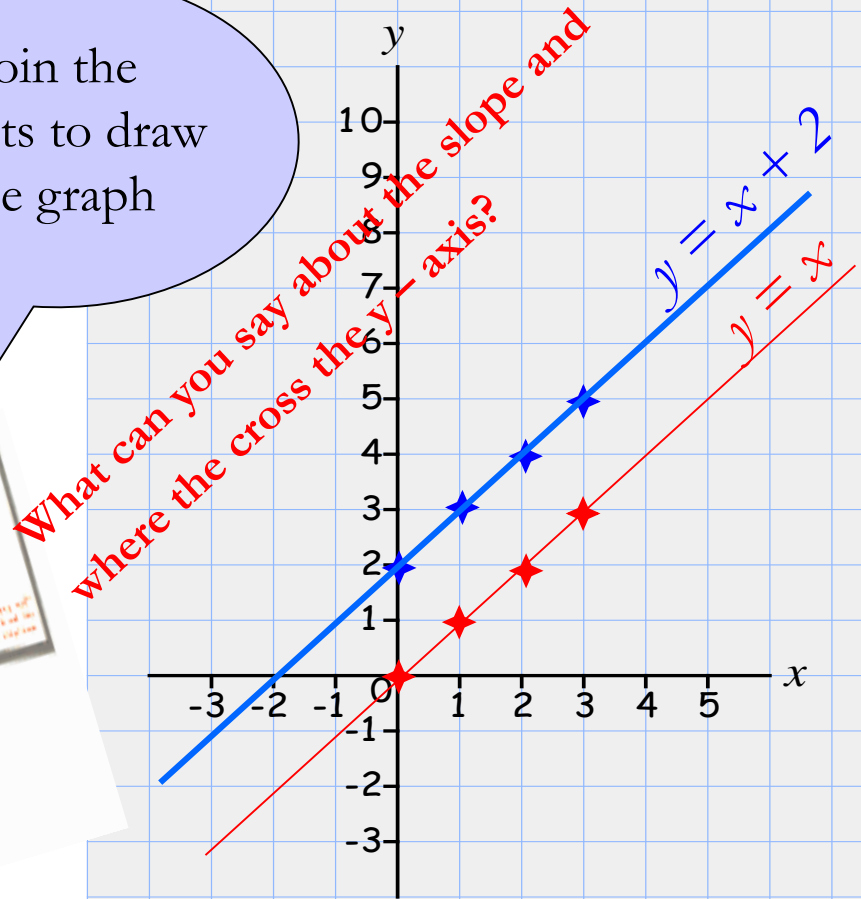
x	0	1	2	3
y	2	3	4	5

Now let's $y = 2x + 2$

x	0	1	2	3
y	2	4	6	8

Let's plot the coordinates of the first two rules on one grid.

Join the points to draw the graph



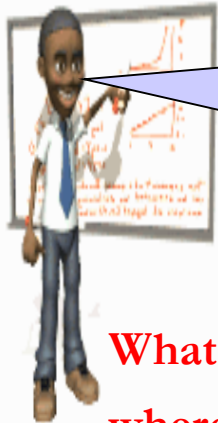
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2) Now let's $y = x + 2$

x	0	1	2	3
y	2	3	4	5

Now let's $y = 2x + 2$

x	0	1	2	3
y	2	4	6	8



Join the points to draw the graph

What can you say about the slope and where the cross the y - axis?

Let's plot the coordinates of the

These two rules on one grid.

