

Straight Line Graphs - Test

1. Draw the graph that passes through the following points and then calculate its gradient:

| | | | | | | |
|---|---|---|---|---|----|----|
| x | 0 | 1 | 2 | 3 | 4 | 5 |
| y | 2 | 4 | 6 | 8 | 10 | 12 |

2. Without drawing the graph, write down the gradient of the graphs for each of the following equations:

a. $y = 2x + 1$ b. $y = 3x - 5$ c. $y = 4 - 3x$ d. $y = 2 - x$

3. Without drawing the graph, write down the y-intercept on the graphs of each of the following equations:

a. $y = x + 3$ b. $y = 2x - 3$ c. $y = 4 - x$ d. $y = 7 - 2x$

4. Write down the gradient and y-intercept for the three equations below and then check your answers by drawing the graphs for x values from -1 to 4.

| | | |
|-----------------|----------------|-----------------|
| a. $y = 2x - 3$ | b. $y = x + 1$ | c. $y = 3 - 2x$ |
|-----------------|----------------|-----------------|

5. Copy and complete this chart. You must show your calculations.

| Equation | Points passed through | The equation of line AB |
|-------------|--------------------------|-------------------------|
| | by a line AB parallel to | |
| | the equation | |
| $y = x + 1$ | (3, 5) | |

| | | |
|--------------|----------|--|
| $y = 2x - 3$ | $(4, 3)$ | |
| $y = 3x + 5$ | $(6, 1)$ | |
| $y = 4x - 7$ | $(2, 7)$ | |
| $y = 4 - x$ | $(4, 1)$ | |
| $y = 5 - 2x$ | $(9, 1)$ | |

6. Using a x-axis that goes from -5 to 5, draw the graphs of:

- a) $y = x + 2$ b) $y = x - 3$ c) $y = 2x + 3$ d) $y = 3x - 2$
e) $y = 5 - x$ f) $y = 3 - x$ g) $y = 8 - 2x$ h) $y = 10 - 3x$

7. Using a x-axis that goes from -10 to 10, draw the graphs of:

- a) $y + x = 8$ b) $y - x = 2$ c) $y + 2x = 10$ d) $y - 3x = 12$
e) $2y - 3x = 6$ f) $3y + 2x = 12$ g) $4y - 2x = 16$ h) $2y + 3x = 18$