

Equations of Linear Graphs



i. Find the equation of the following lines:

- a line with gradient 3 and that passes through the point $(2, 3)$
- a line with gradient -2 and that passes through the point $(-4, -6)$
- a line with gradient 10 and that passes through the point $(1, 5)$

ii. Find the equation of the line that is parallel to:

- $y = -x + 5$ and passes through the point $(-3, 5)$
- $y = 2x + 1$ and passes through the point $(1, 5)$
- $y = 6x - 7$ and passes through the point $(8, 2)$

iii. Is the line $y = 3x - 7$ parallel to the line $3y - 9x = 18$? Give a reason for your answer.

iv. Find the mid-point of the line that is passes through the points:

- $(0, 0)$ and $(2, 2)$
- $(1, 2)$ and $(3, 4)$
- $(2, -1)$ and $(-3, -5)$

v. Find the equation of the line that is passes through the points:

- $(-2, 6)$ and $(4, 0)$
- $(3, -1)$ and $(5, 9)$
- $(2, 4)$ and $(5, 9)$
- $(-2, 1)$ and $(7, 5)$

vi. Find the equation of the following linear graphs:

