

Higher Homework

Gradient

Q1. Calculate the gradients of the lines joining the following pairs of points:

- (i) A(-3, 4) and B(2, -1) (ii) C(1, 8) and D(3, -9)
(iii) E(-3, -7) and F(2, 0) (iv) G(0, -2) and H(2, 0)

Q2. State the gradients of the following equations:

- (i) $y = -x$
(ii) $2x + 3y = 1$
(iii) $0.25x + 5y - 4 = 0$
(iv) $x = 5$

Q3. A line L_1 has the equation $2x + y = -3$. Another line L_2 is parallel to L_1 and passes through the point (0, -4). State the equation of L_2

Q4. State the angle that the line $y + x - 4 = 0$ makes with the positive direction of the x - axis

Q5. The line joining (-3, k) and (1, 4) makes an angle of 56.3° (to 1 d.p.) with the positive direction of the x - axis. Find the value of k

Q6. A line L_1 has the equation $x + 0.5y = 4$. Another line L_2 is perpendicular to L_1 and passes through the point (0, 2). State the equation of L_2