Worksheet 2015-10ℰL-00009(2)

(1) Determine the gradient of the line through (-4 ; -3) and the origin.

(2) Determine the gradient of the line through (2 ; -1) that is also parallel to the *x*-axis.

(3) A(3 ; 7) , B(1 ; 3) and C(5 ; 1) are the vertices of Δ ABC. Show that Δ ABC is a right- angled triangle.

(4) A(-1 ; 3), B(3 ; 5) and C(5 ; 9).

(a) Is A, B and C collinear? Show all calculations.

(b) Prove that AB = BC.

(c) Is B the mid-point of line AC? Show all calculations.

(5) Given: P(-5 ; -2), Q(3 ; -3) and R(2 ; k). Calculate k if:

(a) PQ = QR

(b) PQ // QR

(c) PQ $\perp$ QR