

### Coordinate Geometry Worksheet

1. Find the midpoint, length and gradient of the line joining the points A and B, leave your answers as a surd
  - a)  $A = (1,16)$ ,  $B = (3,10)$
  - b)  $A = (4,-2)$ ,  $B = (-5,1)$

2. Find the equation of these straight lines
  - a) The line through  $(4,2)$ , parallel to  $3x + y + 8 = 0$
  - b) The line through  $(5,30)$ , perpendicular to  $x + 8y = 9$

3. The line P passes through the points  $A(0,-2)$  and  $B(6,7)$ 
  - a) Find the equation of P

The line Q has equation  $x + y = 8$ , Q crosses the x-axis at C and the y-axis at D

- b) Find the coordinates of C and D

P and Q meet at point E.

- c) Find the coordinates of E
- d) Find the area of triangle ADE