1. The equation of line one is $2x + y = 8$

   (a) Write down the gradient of line one (1 mark)

   (b) A second line is perpendicular to line one. What is its gradient? (1 marks)

   (c) The point $(1,1)$ is on line two. Find the equation of line two. (2 marks)

   (d) Line one and line two intersect at point D. Find point D. (2 marks)

Mark scheme:

(a) $m = -2$	(A1)
(b) Perpendicular $m = \frac{1}{2}$	(A1) (ft)
(c) $(y - 1) = \frac{1}{2}(x - 1)$ or $y = \frac{1}{2}x + \frac{1}{2}$	(M1) for substituting their slope and given point into linear equation (A1) (ft) for the correct equation
(d) $(3,2)$	(A1)(ft) (A1)(ft)