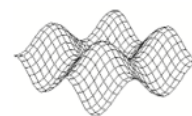




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**2017 – 2018**



**QUESTION 6.1**

(a) 
$$\frac{9-1}{0-(-4)}$$
$$=2$$

**(M1)**

**(A1)(G2) [2 marks]**

**Notes:** Award **(M1)** for correct substitution into the gradient formula.

(b)  $-6$

**(A1) [1 mark]**

**Note:** Accept  $(0, -6)$ .

(c)  $y = -\frac{1}{2}x - 1$  (or equivalent)

**(A1)(ft)(A1)**

**Notes:** Award **(A1)(ft)** for gradient, **(A1)** for correct y-intercept.  
Follow through from their gradient in (a).

$$x + 2y + 2 = 0$$

**(A1)(ft)**

**Notes:** Award **(A1)(ft)** from their gradient and their y-intercept.  
Accept any multiple of this equation with integer coefficients.

**OR**

$$y - 1 = -\frac{1}{2}(x + 4) \text{ (or equivalent)}$$

**(A1)(ft)(A1)**

**Note:** Award **(A1)(ft)** for gradient, **(A1)** for any point on the line correctly substituted in equation.

$$x + 2y + 2 = 0$$

**(A1)(ft) [3 marks]**

**Notes:** Award **(A1)(ft)** from their equation.  
Accept any multiple of this equation with integer coefficients.

(d)  $D(2, -2)$  **or**  $x = 2, y = -2$

**(A1) [1 mark]**

**Note:** Award **(A0)** if brackets not present.

(e)  $R(6, 6)$  **or**  $x = 6, y = 6$

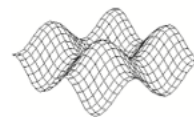
**(A1)(A1) [2 marks]**

**Note:** Award at most **(A0)(A1)(ft)** if brackets not present and absence of brackets has not already been penalised in part (d).

*continued...*



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*Question 6.1 continued*

(f) (i)  $DR = \sqrt{8^2 + 4^2}$  **(M1)**

$DR = \sqrt{80} \text{ (8.94)}$  **(A1)(ft)(G2)**

**Note:** Award **(M1)** for correct substitution into the distance formula. Follow through from their D and R.

(ii)  $\text{Area} = \frac{\sqrt{80} \times \sqrt{45}}{2}$  **(M1)**

$= 30 \text{ (30.0)}$  **(A1)(ft)(G2)**    **[4 marks]**

**Note:** Award **(M1)** for correct substitution in the area of triangle formula. Follow through from their answer to part (f) (i).

**Total [13 marks]**