

Q	Marking instructions	AO	Marks	Typical solution
4(a)(i)	Uses coordinates of $A$ and $B$ to find gradient of $AB$	3.1a	M1	$\text{Grad } AB = \frac{3}{6} = \frac{1}{2} = \text{Grad } DC$ $\text{Equation is } y - 4 = \frac{1}{2}(x - 3)$ $2y = x + 5$
	Obtains correct equation of $CD$ (any form)	1.1b	A1	
	<b>Subtotal</b>		<b>2</b>	

Q	Marking instructions	AO	Marks	Typical solution
4(a)(ii)	Uses perpendicular gradients property.	1.1a	M1	$\text{Grad } DA = \frac{-1}{\text{Grad } AB} = -2$ $\text{Equation is } y + 2 = -2(x - 1)$ $y = -2x$ $\text{Intersect at } (-1, 2) = D$
	Obtains correct equation of $AD$ using their gradient (any form) Or shows that $A$ to $(-1, 2)$ has required gradient of $-2$	1.1b	A1F	
	Obtains correct coordinates of $D$ Or shows that $C$ to $(-1, 2)$ has required gradient of $0.5$ Or shows that $(-1, 2)$ lies on both lines	1.1b	A1	
	<b>Subtotal</b>		<b>3</b>	

Q	Marking instructions	AO	Marks	Typical solution
4(b)(i)	Calculates length of $AB$ and $CD$ . At least one correct.	1.1a	M1	$AB = \sqrt{(36 + 9)} = \sqrt{45} = 3\sqrt{5}$ $CD = \sqrt{(4 + 16)} = \sqrt{20} = 2\sqrt{5}$ $AB + CD = 5\sqrt{5}$
	Obtains correct simplified sum	1.1b	A1	
	<b>Subtotal</b>		<b>2</b>	

Q	Marking instructions	AO	Marks	Typical solution
4(b)(ii)	Calculates $AD$ and applies trapezium area formula	1.1a	M1	$AD = \sqrt{(4 + 16)} = \sqrt{20} = 2\sqrt{5}$ $= \frac{1}{2}(5\sqrt{5} \times 2\sqrt{5})$ $= 25$
	Obtains correct area	1.1b	A1	
	<b>Subtotal</b>		<b>2</b>	

<b>Question Total</b>			<b>9</b>	
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