

Question	Answer	Mark	Mark scheme	Additional guidance
13	70 with reasons	M1	for method to find the size of angle ACD or angle CAD eg $ACD = \frac{180 - 40}{2} (= 70)$ oe or $CAD = \frac{180 - 40}{2} (= 70)$ oe or for method to find the size of angle AOC where O is the centre of the circle eg $AOC = 360 - 90 - 90 - 40 (= 140)$	Correct method can be implied from angles on the diagram if no ambiguity or contradiction Angles must be unambiguously identified. Angle $C = 70$ and Angle $A = 70$ are too ambiguous
		A1	for angle $ABC = 70$	
		C1	(dep on M1) for one reason from Base angles of an <u>isosceles triangle</u> are equal <u>Tangents</u> from an external <u>point</u> are <u>equal</u> in length <u>Angles</u> in a <u>quadrilateral</u> add up to 360 <u>Alternate segment</u> theorem The <u>tangent</u> to a circle is perpendicular to the <u>radius</u> (<u>diameter</u>) The <u>angle</u> at the <u>centre</u> of a circle is <u>twice</u> the <u>angle</u> at the <u>circumference</u>	
		C1	(dep on M1) for a second reason from <u>Alternate segment</u> theorem The <u>tangent</u> to a circle is perpendicular to the <u>radius</u> (<u>diameter</u>) The <u>angle</u> at the <u>centre</u> of a circle is <u>twice</u> the <u>angle</u> at the <u>circumference</u>	