

Question	Answer	Mark	Mark scheme	Additional guidance
22	Proof	C1	for angle $OAP = \text{angle } OBP = 90^\circ$ angle between <u>radius</u> and <u>tangent</u> is $90^\circ$	May be seen as 2 separate diagrams
		C1	for $OA = OB$ both <u>radii</u>	All reasons given must be clearly linked to the appropriate statement
		C1	$OP$ is <u>common</u>	Underlined words need to be shown
		C1	(dep on C3) for a complete proof with all reasons given, eg triangles $OAP$ and $OBP$ are congruent RHS so $AP = BP$ or $AP = \sqrt{OP^2 - OA^2}$ and $BP = \sqrt{OP^2 - OB^2}$ and $OA = OB$ so $AP = BP$	
22 ALT	Proof	C1	for $\cos AOP = \frac{AO}{OP} = \frac{r}{OP}$ or $\cos BOP = \frac{BO}{OP} = \frac{r}{OP}$ angle between <u>radius</u> and <u>tangent</u> is $90^\circ$	May be seen as 2 separate diagrams
		C1	for $\cos AOP = \frac{AO}{OP} = \frac{r}{OP}$ <b>and</b> $\cos BOP = \frac{BO}{OP} = \frac{r}{OP}$ <b>and</b> $AOP = BOP$ both <u>radii</u>	
		C1	$OP$ is <u>common</u>	Underlined words need to be shown
		C1	(dep on C3) for a complete proof with all reasons given, eg triangles $OAP$ and $OBP$ are congruent SAS so $AP = BP$	