

Question	Scheme	Mark	Notes
9	$(BC+10) \times 10 = (12+8) \times 8$ (oe) $BC = 6$ (cm)	2	M1 A1
10	(1,5), (5,1), (2, 4), (4,2), (3, 3) OR a 6 x 6 table with 5 possible double rolls identified OR at least 3 correct probability products added All 5 correct probability products added, $5 \times \left(\frac{1}{6}\right)^2$ $\frac{5}{36}$, awrt 0.139, 13.9%	3	M1 M1 (DEP) A1
11	$\overrightarrow{OY} = \begin{pmatrix} -4 \\ 2 \end{pmatrix} - \begin{pmatrix} -7 \\ 6 \end{pmatrix} = \begin{pmatrix} 3 \\ -4 \end{pmatrix}$ $ \overrightarrow{OY} = \sqrt{3^2 + (-4)^2}$ Second M mark for the modulus of their \overrightarrow{OY} but not for \overrightarrow{OX} or \overrightarrow{YX} NB: Accept working for \overrightarrow{YO} 5 (obtained from correct working) M1M1A0 max if $\overrightarrow{OY} = \begin{pmatrix} -3 \\ 4 \end{pmatrix}$ used	3	M1 M1 A1
12	$\angle BCD = 45$ or $\angle DBC = 45$ and $\angle ACE = 60$ OR Join AB $\therefore \angle ABC = 60$ (Alt. Seg Thm) $\therefore \angle RBA = 75$ $\angle ACB = 75^\circ$ \angle s on straight line and Tangents to a circle have the same length. OR \angle s on straight line and Isosceles Δ s OR (From 1 st B1: Alternate Segment Thm twice)) NB: Accept angles on diagram	3	B1 B1 B1