

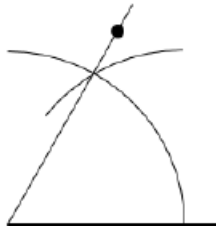
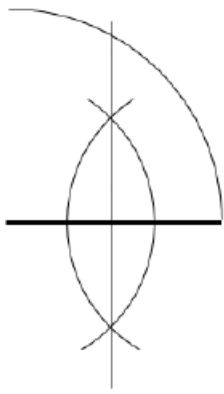
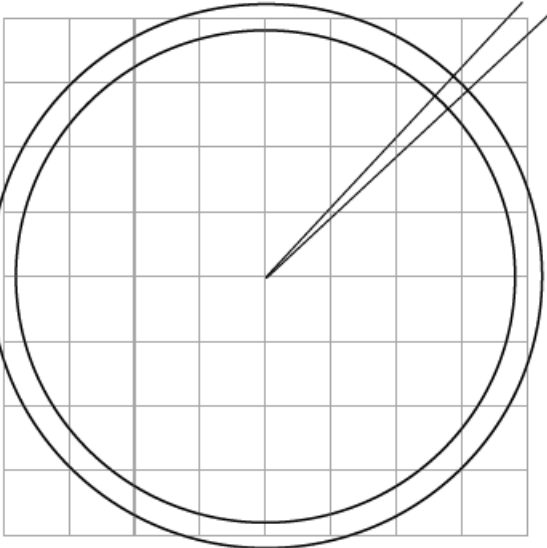


1	Side of length [7.8, 8.2] cm drawn	B1	
	<p>Correct construction with intersecting arcs, same radius as their base ± 2 mm to identify the third vertex</p> <p>or</p> <p>correct construction with intersecting arcs, equal radii ± 2 mm, line drawn at 60° and third vertex correctly positioned</p> <p>or</p> <p>correct construction with intersecting arcs, equal radii ± 2 mm and construction arc drawn to correctly identify the third vertex</p>	M1	  <p>or</p>  <p>or</p> 
	Triangle with equal sides [7.8, 8.2], with correct construction seen	A1ft	ft B0M1 triangle with equal sides ± 2 mm, with correct construction seen
	Additional Guidance		
	No construction arcs drawn can score a maximum of B1		

Q	Answer	Mark	Comments
2(a)	Point marked on grid North East of A	B1	$\pm 2^\circ$
	Point marked 4 cm from A	B1	$\pm 2\text{ mm}$
	Additional Guidance		
			
	Ignore any North lines marked on grid		
	Point marked 3 cm right and 3 cm up – condone in tolerance		B1B1
	Point marked on top right corner of the grid		B1B0
	Assume the end of a line drawn from A with no point marked is their B		
	The point must be marked or implied by the end of a line from A, just writing the letter B is not enough to indicate the point		B0B0

Q	Answer	Mark	Comments
2(b)	180	B1	
Q	Answer	Mark	Comments
2(c)	30	B1	

Q	Answer	Mark	Comments
3(a)	Correct triangle drawn where angle QPR is $[51, 55]^\circ$ and PR is $[7.3, 7.7]$ cm	B2	B1 Angle QPR is $[51, 55]^\circ$ or PR is $[7.3, 7.7]$ cm or Angle PQR is $[51, 55]^\circ$ and QR is $[7.3, 7.7]$ cm
	Additional Guidance		
	Ignore attempts to label R		
	PR drawn correctly, but not connected to Q		B1

Q	Answer	Mark	Comments
4	Alternative method 1		
	Pair of arcs, equal radii (± 2 mm), centre B , intersecting AB and BC	M1	oe eg single arc, centre B , intersecting AB and BC or single arc, centre B , radius BC (± 2 mm), intersecting AB
	Pair of intersecting arcs, equal radii (± 2 mm), centres the intersections on AB and BC and angle bisector drawn from B at least to the intersection of their arcs	A1	dashed line or condone solid line
	Correct region R shown as the area between AB and a straight line from B to within 2mm of AD	B1	R may be labelled or shaded arcs not required for this mark only SC1 angle bisector for a different angle correctly constructed with arcs
	Alternative method 2		
	Concentric arcs from B , each intersecting AB and BC	M1	intersections with AB and BC must be seen, but full arcs are not necessary
	Two lines from the AB intersection of one arc to the BC intersection of the other arc and angle bisector drawn from B at least to the intersection of their lines	A1	dashed line or condone solid line
	Correct region R shown as the area between AB and a straight line from B to within 2mm of AD	B1	R may be labelled or shaded arcs not required for this mark only SC1 angle bisector for a different angle correctly constructed with arcs
	Additional Guidance		
	Mark any correct construction, ignoring incorrect attempts		
	Unless shaded incorrectly, ignore construction arcs or other lines in the region labelled		
	Bisector drawn with no construction arcs, but region correctly identified		M0A0B1

Q	Answer	Mark	Comments
5	Angle $[88^\circ, 92^\circ]$ at B	M1	length ≥ 1 cm for vertical may be implied by a point marked
	Line parallel to AB	M1	mark intention length ≥ 1 cm may be implied by two points marked
	Quadrilateral $ABCD$ with angle $ABC = [88^\circ, 92^\circ]$ and CD parallel to BA and $BC = [3.8, 4.2]$ cm and $DC = [5.8, 6.2]$ cm	A1	sides must be joined and look straight ignore extra lines and lines extended SC2 reflection of correct shape with right angle at A (ignore labels)
	Additional Guidance		
	Lengths of lines (as long as ≥ 1 cm) irrelevant for up to M2		
	Condone absence of labels C and D		
	Correct quadrilateral with C and D labels swapped		M2A0