

**SCALE DRAWINGS**

**Pearson Edexcel - Friday 6 November 2015 - Paper 2 (Calculator) Higher Tier**

1.

9			Correct line drawn	2	M1 for two pairs of relevant arcs drawn A1 correct line drawn ( with arcs)  SC B1 Correct line no arcs visible
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**Pearson Edexcel - Monday 8 June 2015 - Paper 2 (Calculator) Higher Tier**

2.

10			Loci drawn	3	B1 for line parallel to $BC$ and 3 cm from $BC$ B1 for arc drawn, centre $C$ , with radius 4 cm B1 ft for shading a region below their horizontal line <b>and</b> inside their arc
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**Pearson Edexcel - Wednesday 5 November 2014 - Paper 1 (Non-Calculator) Higher Tier**

3.

10			construction	2	M1 for a pair of arcs or a single arc, centre $C$ , that cut line $AB$ <b>and</b> at least one pair of arcs not at $C$ within guidelines A1 for perpendicular within guidelines with appropriate construction arcs  <b>OR</b> M1 for an arc, centre $A$ radius $AC$ <b>and</b> an arc centre $B$ radius $BC$ . The two arcs must intersect below $AB$ A1 for perpendicular within guidelines with appropriate construction arcs  (SC If M0 scored, B1 for correct perpendicular line within guidelines)
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**Pearson Edexcel - Monday 9 June 2014 - Paper 1 (Non-Calculator) Higher Tier**

4.

8			Correct region	3	B1 for full line drawn 1.5 cm from edge of patio and parallel to it B1 for full arc of circle radius 3 cm centre the centre of the pond B1 ft for shading region to the right of their vertical line <b>and</b> outside the arc of their circle with correct centre
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**Pearson Edexcel - Wednesday 6 November 2013 - Paper 1 (Non-Calculator) Higher Tier**

5.

*10			Not enough, needs £133	5	<p>M1 for splitting the shape (or showing recognition of the “absent” rectangle) and using a correct method to find the area of one shape  M1 for a complete and correct method to find the total area  M1 for a complete method to find 70% of 19 (= 13.3) or 70% of their total cost or 70% of their area  A1 114(m<sup>2</sup>) and (£)133 or 114(m<sup>2</sup>) and (£)13.3(0) and 108(m<sup>2</sup>)  C1 (dep on M2) for a conclusion supported by their calculations</p> <p>OR</p> <p>M1 for a complete method for the number of tins required for one section of the area of the floor  M1 for a complete method to find the number of tins for the whole floor  M1 for a complete method to find 70% of their total number of tins and multiply by 19  A1 (£)133  C1 (dep on M2) for a conclusion supported by their calculations</p>
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**Pearson Edexcel - Tuesday 11 June 2013 - Paper 1 (Non-Calculator) Higher Tier**

6.

*13			Yes with explanation	3	<p>M1 for bearing <math>\pm 2^\circ</math> within overlay  M1 for use of scale to show arc within overlay or line drawn from C to ship’s course with measurement  C1(dep M1) for comparison leading to a suitable conclusion from a correct method</p>
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**Pearson Edexcel - Thursday 28 February 2013 - Paper 1 (Non-Calculator) Higher Tier**

7.

15			Required region	4	<p>M1 arc radius 5 cm centre C  M1 bisector of angle <i>BAD</i>  M1 line 3 cm from <i>DC</i>  A1 for correct region identified (see overlay)</p>
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**Pearson Edexcel - Tuesday 6 November 2012 - Paper 1 (Non-Calculator) Higher Tier**

8.

10			Region shaded	3	<p>B1 for circle arc of radius 3cm (<math>\pm 2</math>mm) centre Burford  B1 for circle arc of radius 5 cm (<math>\pm 2</math>mm) centre Hightown  B1 for overlapping regions of circle arcs shaded</p>
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**OCR GCSE – Tuesday 5 November 2019 – Paper 6 (Calculator) Higher Tier**

9.

13	(a)	241.[1...]	3	<p><b>M2</b> for <math>90 + 72^3 [\times 100^3]</math>  or  <b>B1</b> for <math>72^3</math> or <math>373\,248</math> or <math>100^3</math> or <math>1\,000\,000</math></p>	implied by e.g. 90 000 000
	(b)	392	3	<p><b>M2</b> for <math>8 \times 7 \times 7</math>  or  <b>M1</b> for <math>8 \times 7 \times 8</math> or <math>8, 7, 7</math> clearly identified (e.g. summed)  if 0 scored award <b>SC2</b> for <math>8 \times 7 \times 6</math>  or <b>SC1</b> for <math>8 \times 8 \times 8, 6 \times 7 \times 6</math></p>	<p>e.g. 448 as answer  implied by 336  implied by 512 or 252</p>

OCR GSCE – Thursday 7 November 2019 – Paper 5 (Non-Calculator) Higher Tier

10.

9	(a)	2500	1		Ignore units
9	(b)	<p>Bisector of angle BCD accurate with pairs of correct arcs</p> <p>Arc centre E radius 3 cm with length fit for purpose</p> <p>No oe with correct constructions</p>	<p><b>M2</b></p> <p><b>M2</b></p> <p><b>B1</b></p>	<p><b>B1</b> for accurate bisector of angle BCD with no/incorrect arcs</p> <p><b>B1</b> for arc centre E</p> <p>Dep on at least <b>B1M2</b></p>	<p>Tol <math>\pm 2^\circ</math> use overlay Condone solid/broken lines bisector</p> <p>Tol <math>\pm 2</math> mm For <b>B1</b> accept 5 correctly marked points in tolerance Accept the boat will travel within 75 m</p>

OCR GSCE – Monday 12 November 2018 – Paper 6 (Calculator) Higher Tier

11.

5	(a)	<p><math>180 + 3.5 \times 11.2 = 576</math></p> <p>or</p> <p><math>180 + 3.5 = 51.4[\dots]</math> and <math>576 + 11.2 = 51.4[\dots]</math></p> <p>or</p> <p><math>576 + 180 = 3.2</math> and <math>11.2 + 3.5 = 3.2</math></p>	3	<p><b>M2</b> for <math>180 + 3.5 \times 11.2</math> or <math>180 + 3.5</math> and <math>576 + 11.2</math> or <math>576 + 180</math> and <math>11.2 + 3.5</math></p> <p>or</p> <p><b>M1</b> for <math>180 + 3.5</math> soi <math>51.4[\dots]</math> or <math>576 + 11.2</math> soi <math>51.4[\dots]</math> or <math>576 + 180</math> soi <math>3.2</math> or <math>11.2 + 3.5</math> soi <math>3.2</math></p>	<p>For M marks allow figs used eg <b>M2</b> for <math>18 + 350 \times 112</math> If in two stages: For full marks, condone premature rounding if accurate and answer is stated as 576. E.g. <b>3</b> marks for <math>180 + 3.5 = 51.4</math> and <math>51.4 \times 11.2 [= 575.68 \text{ or } 575.7] = 576</math> (<b>required</b>) eg <b>M2</b> for <math>180 + 3.5 = 51.5</math> and <math>51.5 \times 11.2 = 576</math> Accept equivalent methods eg divisions inverted or correct use of lengths in other units.</p>
	(b)	No oe and correct explanation	2	<p><b>B1</b> for <math>180 + k \times 11.2</math> where <math>k &gt; 3.5</math> leading to answer <math>&lt; 576</math></p> <p>or</p> <p><math>[180 + 3.5 =] 51.4\dots</math> and <math>180 + k, k &gt; 3.5</math> leading to answer <math>&lt; 51.4(\dots)</math></p> <p>or</p> <p>Each cm on the map will be worth fewer km in real life oe</p>	<p>For full marks, clear conclusion and an explanation earning <b>B1</b> is needed</p> <p><math>[180 + 3.5 =]</math> may be referred to in (a)</p>
	(c)	7500 cao	2	<b>M1</b> for figs 18 + figs 24 soi figs 75	If units included in answer max <b>M1</b>

OCR GSCE – Thursday 24 May 2018 – Paper 4 (Calculator) Higher Tier

12.

5	(a)	610.7 to 632.2	5	<p><b>B2</b> for 1425 to 1475 or <b>B1</b> for 11.4 to 11.8 or <b>M1</b> for <i>their length</i> <math>\times 125</math> AND <b>B1</b> for <math>2\frac{1}{3}, 2[h] 20</math> or 2.33... or 140 and <b>M1</b> for distance + time and <b>A1FT</b> ft for a correct answer for <i>their length</i></p>	<p>See additional guidance</p> <p>This calculation must be seen and distance must be <i>their</i> measurement or <i>their</i> measurement <math>\times 125</math>. You must be convinced that it is a time as a divisor.</p>
	(b)	accept any correct reason e.g. it may not have flown in a straight line or it may have been diverted	1		If more than one choose the best one. Comment about distance only, see list of exemplars.

OCR GSCE – Thursday 24 May 2018 – Paper 4 (Calculator) Higher Tier

13.

7	(a)	Accurate angle bisector with 2 pairs of correct arcs	2	<b>B1</b> for correct bisector with no arcs or incorrect arcs	The bisector does not have to go through A but if extended it must go through A and it must lie within green lines in overlay. For <b>2</b> marks condone intersecting arcs of equal radius, one centre B and the other centre C for the construction with bisector drawn. For arc, measure radius using ruler. tolerance $\pm 2$ mm and $\pm 2^\circ$ for both constructions
		Arc centre C radius 7cm  Correct region indicated	2  <b>1Dep</b>	<b>B1</b> for arc centre C with incorrect radius  Dependent on at least <b>B1</b> for bisector and <b>B2</b> for arc	
	(b)	accept any correct assumption e.g. Road[s] is not/are not straight, road AB is busier than road AC, land is not suitable for construction	1		If more than one choose the best one see list of exemplars

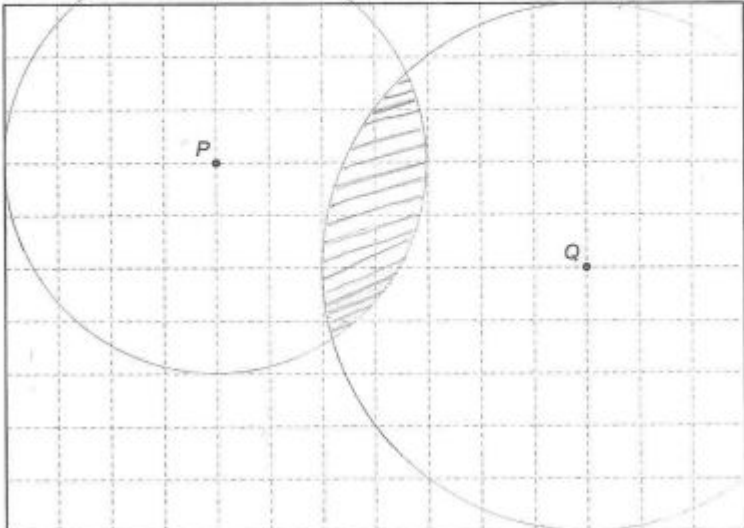
OCR GSCE – Tuesday 13 June 2017 – Paper 6 (Calculator) Higher Tier

14.

2	a	i	9.6	1 1 AO1.3a		
		ii	2500	1 1 AO1.2	Condone 1 : 2500	
	b		Arc centre B radius 6 cm meeting AB and CB or AB and bisector of ADC  Ruled bisector of angle ADC to reach BC with construction arcs or Bisector with construction arcs from BC to <i>their</i> arc centre B  Correct region shaded	2  2  1 1 AO2.3a 2 AO2.3b 1 AO3.1d 1 AO3.3	<b>B1</b> for any arc centre B meeting AB and BC or short arc (at least 1cm) radius 6 cm centre B  <b>B1</b> for correct ruled bisector at least 2cm long by eye with no construction arcs or correct construction arcs with no bisector drawn  <b>Dep</b> on <b>B1</b> and <b>B1</b>  If 0 scored <b>SC1</b> for 6 [cm] [= 150] [m] seen	Accept dashed or dotted for all marks Freehand, all within template, max <b>B1</b> Allow beyond AB and BC for 1 or 2 marks Tolerance 5.8 to 6.2 cm  Tolerance $\pm 2^\circ$  Construction arcs on AD and on DC and two intersecting arcs from these

AQA GSCE – Thursday 7 June 2018 – Paper 2 (Calculator) Higher Tier

15.

	Arc radius [3.8, 4.2] cm centre $P$ or arc radius [4.8, 5.2] cm centre $Q$	M1	only need arcs within tolerance for the correct region ignore other lines M1 arc radius [3.8, 4.2] cm centre $Q$ and arc radius [4.8, 5.2] cm centre $P$ and correct ft region identified
	Arc radius [3.8, 4.2] cm centre $P$ and arc radius [4.8, 5.2] cm centre $Q$ and region identified	A1	only need arcs within tolerance for the correct region ignore other lines
<b>Additional Guidance</b>			
	Arcs may go outside the rectangle		
<b>14</b>	Allow any unambiguous indication of the region eg labelled R or appropriate shading		
	Do not accept highlighting the perimeter of the region for identification of the region		
			M1A1