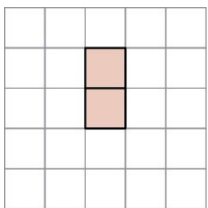
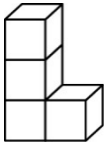
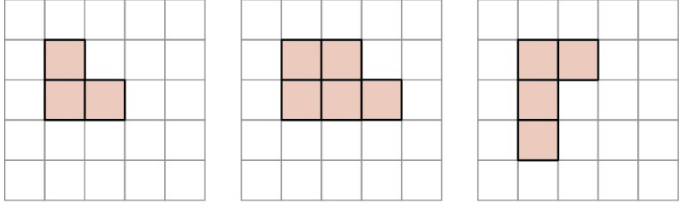
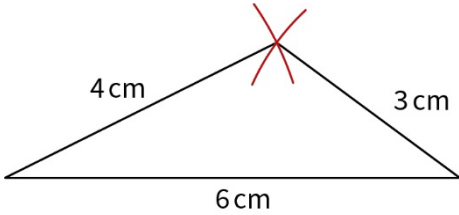
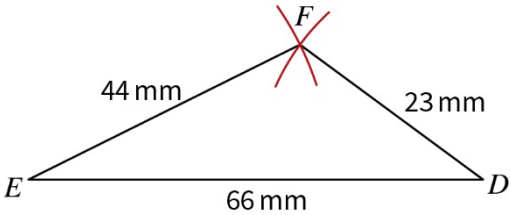
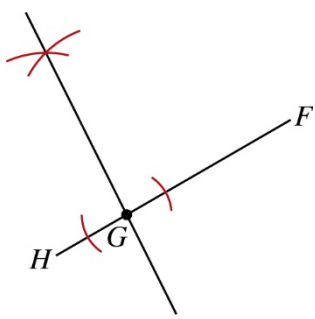
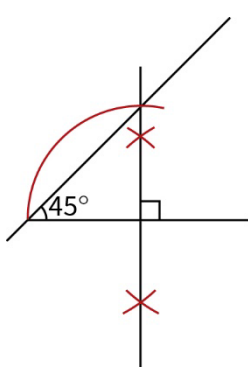


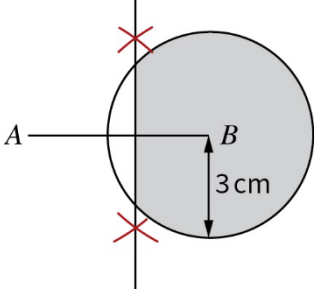
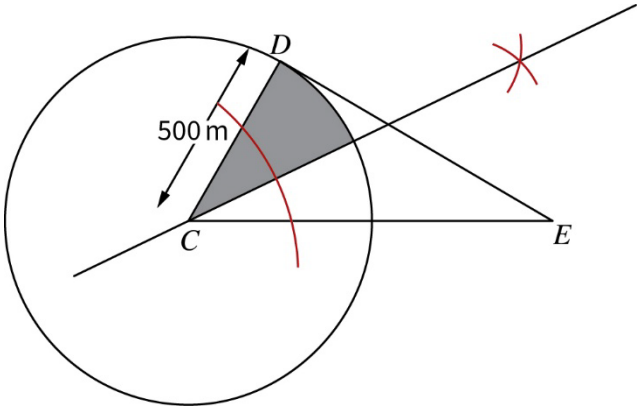
# Oxford Revise | Edexcel GCSE Maths Higher | Answers

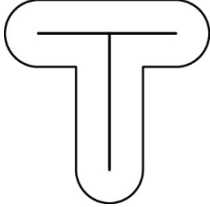
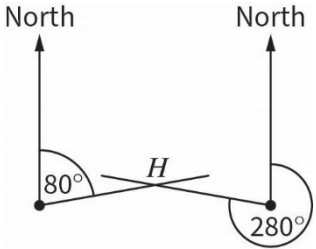
## Chapter 24 Plans, elevations, constructions, bearings

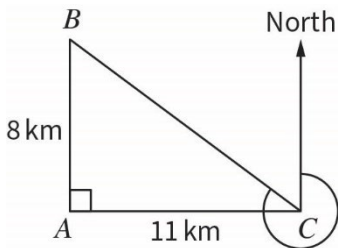
Question	Answer	Extra information	Marks
24.1	Enlargement, scale factor 2, centre of enlargement at $(-4, 4)$	Enlargement Scale factor 2 $(-4, 4)$	1 1 1
24.2 (a)		Correct diagram in any orientation	1
24.2 (b)		Correct 3D drawing of an 'L-shape' Fully correct diagram (may be facing left or right).	1 1
24.2 (c) (i)	12 vertices		1
24.2 (c) (ii)	18 edges		1
24.2 (c) (iii)	8 faces		1

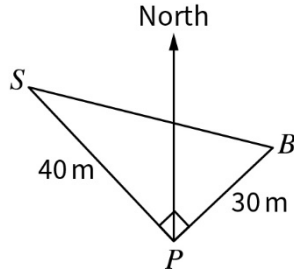
Question	Answer	Extra information	Marks
24.3	 <p><b>Front elevation</b>    <b>Side elevation</b>    <b>Plan</b></p>	1 mark for each correct diagram; note the plan can be in any orientation as long as it's from above	1 1 1
24.4 (a)	<b>B:</b> The sum of the lengths of the shorter two sides must be greater than the longest side length		1
24.4 (b)		One side correctly drawn Second side Fully correct diagram (any orientation)	1 1 1
24.5		Each line (correct to 1 mm)	1 1 1

Question	Answer	Extra information	Marks
24.6		<p>Construction arcs both sides of <math>G</math>            Second set of intersecting construction arcs either side of line segment (either above the line <math>FH</math> as shown, or below);            Fully correct diagram.</p>	<p>1 1 1</p>
24.7		<p>Construction arcs either side of a line segment and perpendicular line drawn            Arc intersecting perpendicular line            Fully correct diagram with angle labelled.            Full marks also given if instead of using the arc to make a triangle, you correctly bisected the <math>90^\circ</math> angle constructed.</p>	<p>3</p>

Question	Answer	Extra information	Marks
24.8		<p>Construction arcs either side of <math>AB</math> and perpendicular bisector drawn</p> <p>Circle centre <math>B</math></p> <p>3 cm radius</p> <p>Correctly shaded region.</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>
24.9		<p>Construction arc(s) intersecting <math>CD</math> and <math>CE</math> and pair of intersecting arcs in the space between <math>D</math> and <math>E</math></p> <p>Angle bisector drawn</p> <p>Circle or arc centre <math>C</math> with radius of <math>CD</math></p> <p>Correct shaded region.</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>

Question	Answer	Extra information	Marks
24.10	 <p>2.5 m = 250 cm  <math>250 \div 125 = 2</math>                      The locus needs to be 2 cm from the track</p>	<p>Attempt to use the ratio to calculate the distance from the track (= 2 cm)                      Any correct straight line 2 cm from the <i>T</i> or any semicircle in correct position with 2 cm radius                      Fully correct locus.                      Total 3 marks</p>	<p>1 1 1</p>
24.11		<p>Either 080° bearing or 280° bearing drawn correctly                      Both bearings drawn correctly;                      Correct lines intersecting and labelled <i>H</i>.</p>	<p>1 1 1</p>

Question	Answer	Extra information	Marks
24.12	 <p> <math>\tan BCA = \frac{8}{11}</math>  <math>BCA = \tan^{-1}\left(\frac{8}{11}\right) = 36^\circ</math>                      Bearing of <math>B</math> from <math>C</math> is <math>270 + 36 = 306^\circ</math> </p>	<p> <math>\tan BCA = \frac{8}{11}</math>  <math>36.027\dots^\circ</math>  <math>270 + BCA</math>                      Correct answer to nearest degree                 </p>	<p>1 1 1 1</p>

Question	Answer	Extra information	Marks
24.13	 <p><math>S = \text{swimmer}; B = \text{buoy}; P = \text{lookout post}</math>  <math>SB = \sqrt{30^2 + 40^2} = 50</math></p>	<p>Sketch showing a right-angled triangle            Attempt to use Pythagoras  <math>\sqrt{2500}</math>            Correct answer</p>	<p>1 1 1 1</p>
24.14	<p>Angle <math>ABC = 34^\circ</math> (alternate angles)            Base angles of isosceles triangle are equal so <math>BCA = \frac{180 - 34}{2} = 73^\circ</math>            Bearing of A from C = <math>360 - 73 = 287^\circ</math></p>	<p>Determining angle <math>ABC</math>            Determining angle <math>BCA</math>  <math>287^\circ</math></p>	<p>1 1 1</p>
24.15 (a)	$105 \leq p < 115$	<p>Correct lower bound            Correct upper bound</p>	<p>1 1</p>
24.15 (b)	$107.5 \leq p < 112.5$	<p>Correct lower bound            Correct upper bound</p>	<p>1 1</p>
24.16 (a)	$4.665 \leq x < 4.675$	<p>Correct lower bound            Correct upper bound</p>	<p>1 1</p>
24.16 (b)	$4500 \leq x < 5500$	<p>Correct lower bound            Correct upper bound</p>	<p>1 1</p>