



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle 2024

Marking Scheme

Graphics

Common Level

Note to teachers and students on the use of published marking schemes

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

Future Marking Schemes

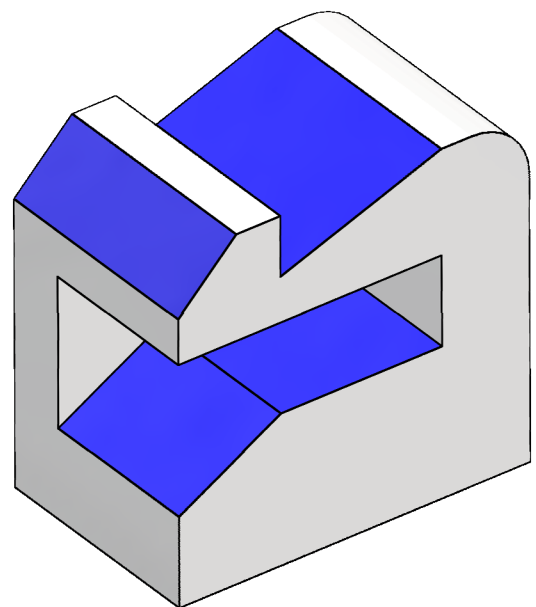
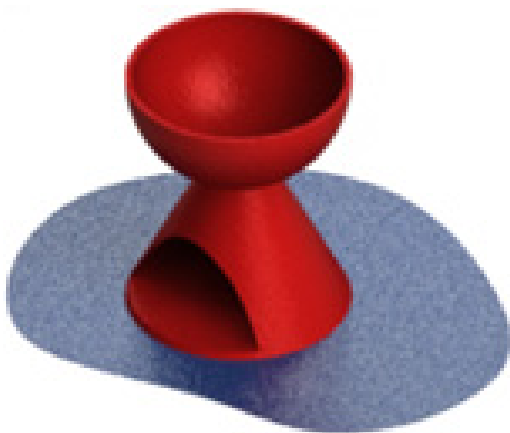
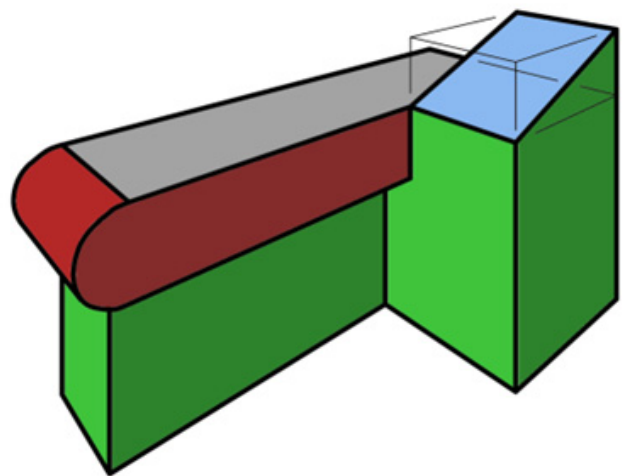
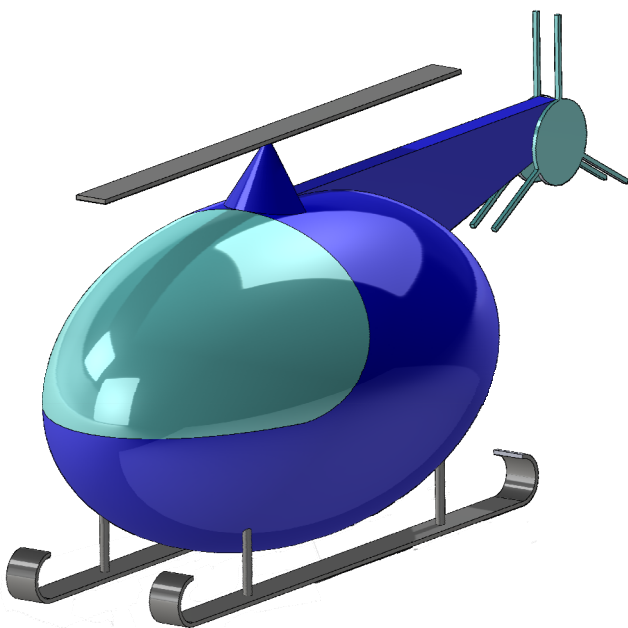
Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.



Junior Cycle Examination 2024

Graphics - Common Level


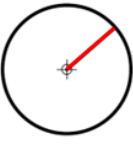

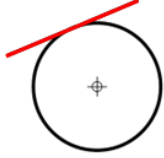

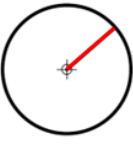

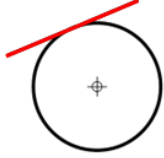

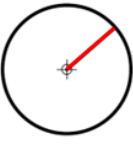

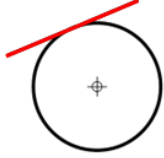
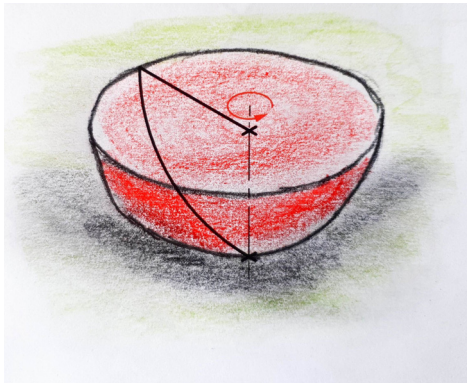
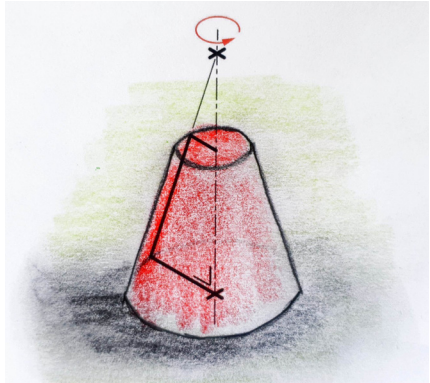
Grafaic - Comhleibhéal

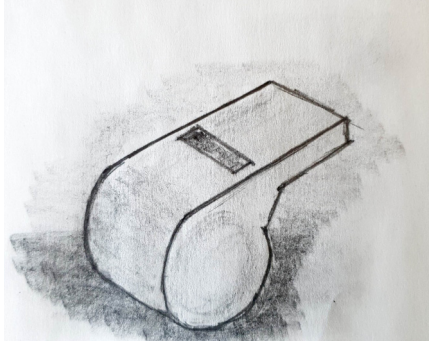
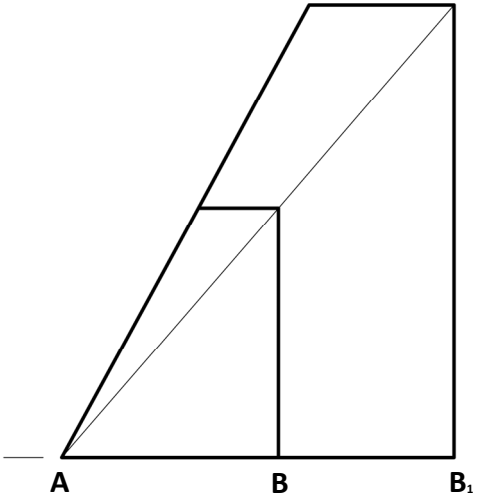
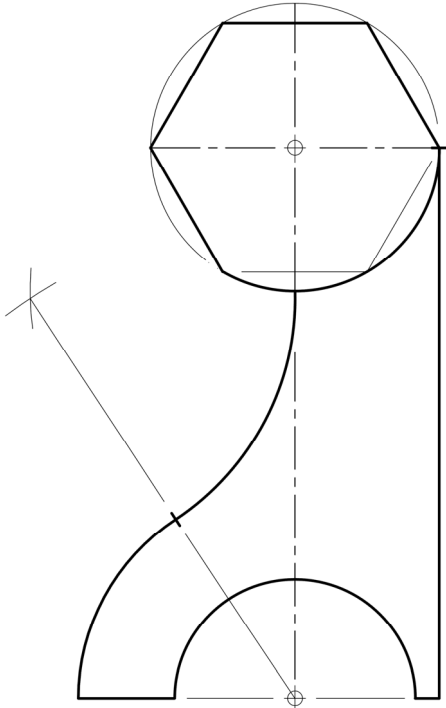


Marking Scheme
Scéim Mharcála

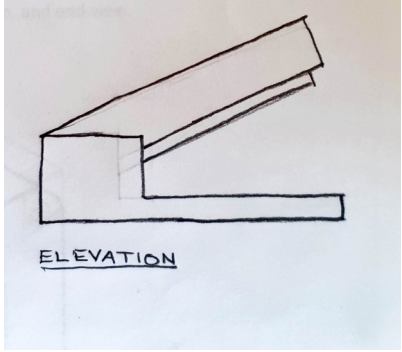
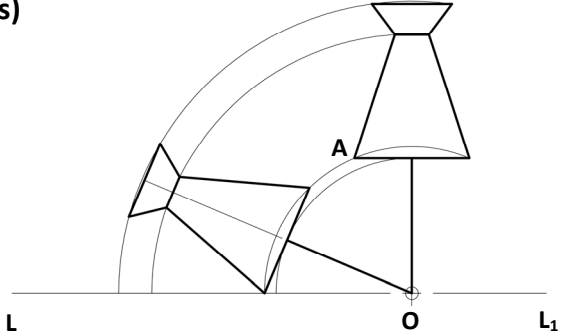
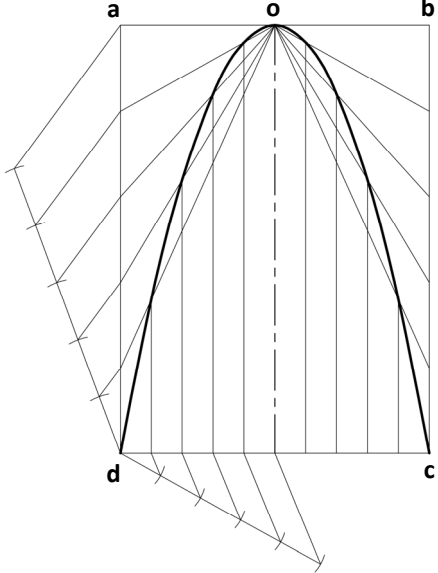
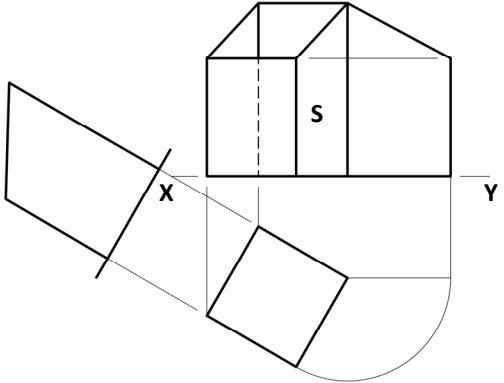
Answer *all* questions

Page 2 – Question 1

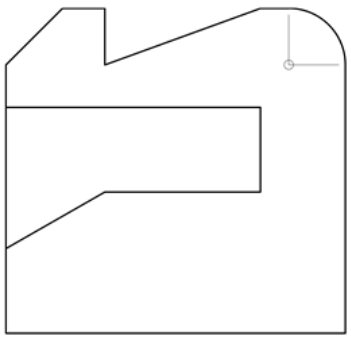
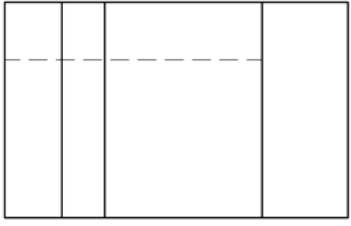
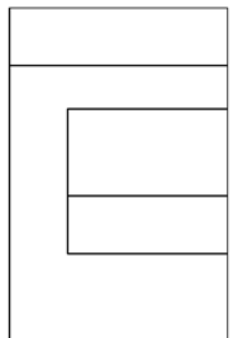
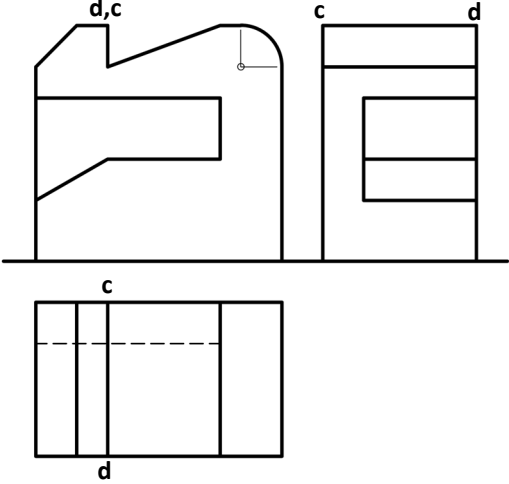
<p>Q1 (a)</p>	<p>2 2 2 2 8</p>	<p>(4 x 2 marks)</p> <table border="1"> <tbody> <tr> <td data-bbox="699 331 879 501">  </td> <td data-bbox="954 353 1118 465"> <p>Term: Concentric <input checked="" type="checkbox"/> Eccentric <input type="checkbox"/></p> </td> </tr> <tr> <td data-bbox="746 524 879 667">  </td> <td data-bbox="954 524 1118 636"> <p>Term: Radius <input checked="" type="checkbox"/> Diameter <input type="checkbox"/></p> </td> </tr> <tr> <td data-bbox="746 696 879 840">  </td> <td data-bbox="954 696 1118 808"> <p>Term: Segment <input type="checkbox"/> Quadrant <input checked="" type="checkbox"/></p> </td> </tr> <tr> <td data-bbox="715 862 879 1019">  </td> <td data-bbox="954 875 1118 987"> <p>Term: Tangent <input checked="" type="checkbox"/> Normal <input type="checkbox"/></p> </td> </tr> </tbody> </table>		<p>Term: Concentric <input checked="" type="checkbox"/> Eccentric <input type="checkbox"/></p>		<p>Term: Radius <input checked="" type="checkbox"/> Diameter <input type="checkbox"/></p>		<p>Term: Segment <input type="checkbox"/> Quadrant <input checked="" type="checkbox"/></p>		<p>Term: Tangent <input checked="" type="checkbox"/> Normal <input type="checkbox"/></p>				
	<p>Term: Concentric <input checked="" type="checkbox"/> Eccentric <input type="checkbox"/></p>													
	<p>Term: Radius <input checked="" type="checkbox"/> Diameter <input type="checkbox"/></p>													
	<p>Term: Segment <input type="checkbox"/> Quadrant <input checked="" type="checkbox"/></p>													
	<p>Term: Tangent <input checked="" type="checkbox"/> Normal <input type="checkbox"/></p>													
<p>Q1 (b)</p>	<p>6 6</p>	<p>(3 x 2 marks)</p> <table border="0"> <thead> <tr> <th></th> <th>True</th> <th>False</th> </tr> </thead> <tbody> <tr> <td>(i) The diameter divides a circle into two equal parts.</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>(ii) There are 360° in a full circle.</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>(iii) Half of the radius is equal to the diameter.</td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table>		True	False	(i) The diameter divides a circle into two equal parts.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(ii) There are 360° in a full circle.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(iii) Half of the radius is equal to the diameter.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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(iii) Half of the radius is equal to the diameter.	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
<p>Q1 (c)</p>	<p>12 12</p>	<p>(2 x 6 marks) 4 marks for sketch, 2 marks for appropriate rendering</p> <div style="display: flex; justify-content: space-around;">   </div>												
<p>Page 2</p>	<p>26</p>													

<p>Q2 (a)</p>	<p>4 2 6</p>	<p>Sketch (4 marks) Appropriate render (2 marks)</p>	
<p>Q2 (b)</p>	<p>2 2 2 6</p>	<p>Correct vertical at B_1 (2 marks) Radiating lines (2 marks) Completion (2 marks)</p>	
<p>Q2 (c)</p>	<p>2 4 4 2 4 4 2 22</p>	<p>Hexagon</p> <p>R25 arc (2 marks), R45 arc (2 marks) Locate centre of R55 arc (2 marks) Draw R55 arc (2 marks) R30 circle (2 marks) Partial hexagon (4 marks) Completion (4 marks) Points of contact (2 marks)</p>	
<p>Page 3</p>	<p>34</p>		

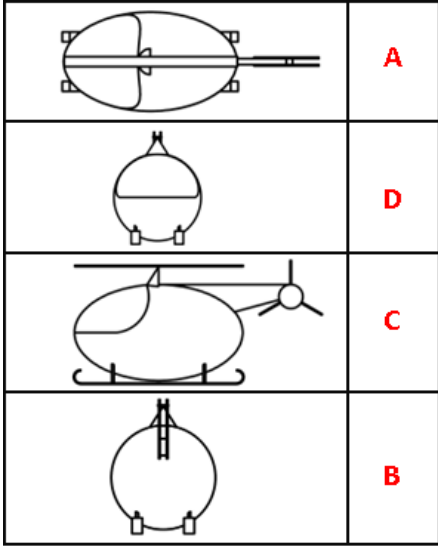
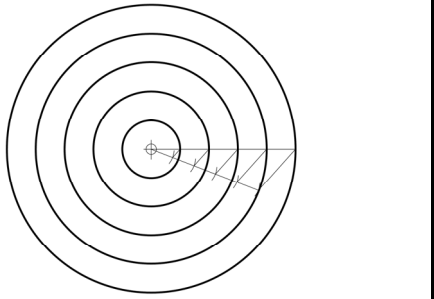
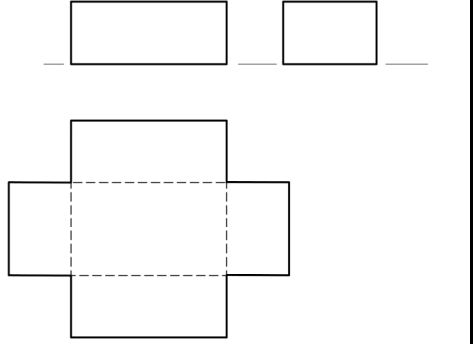
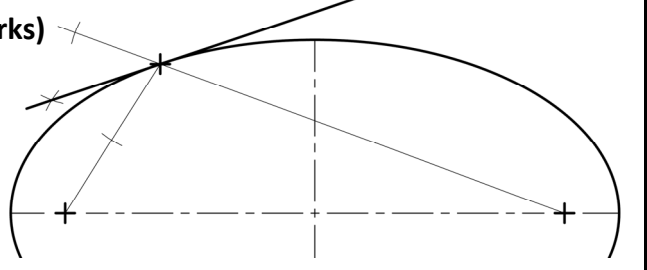
Page 4 – Question 3

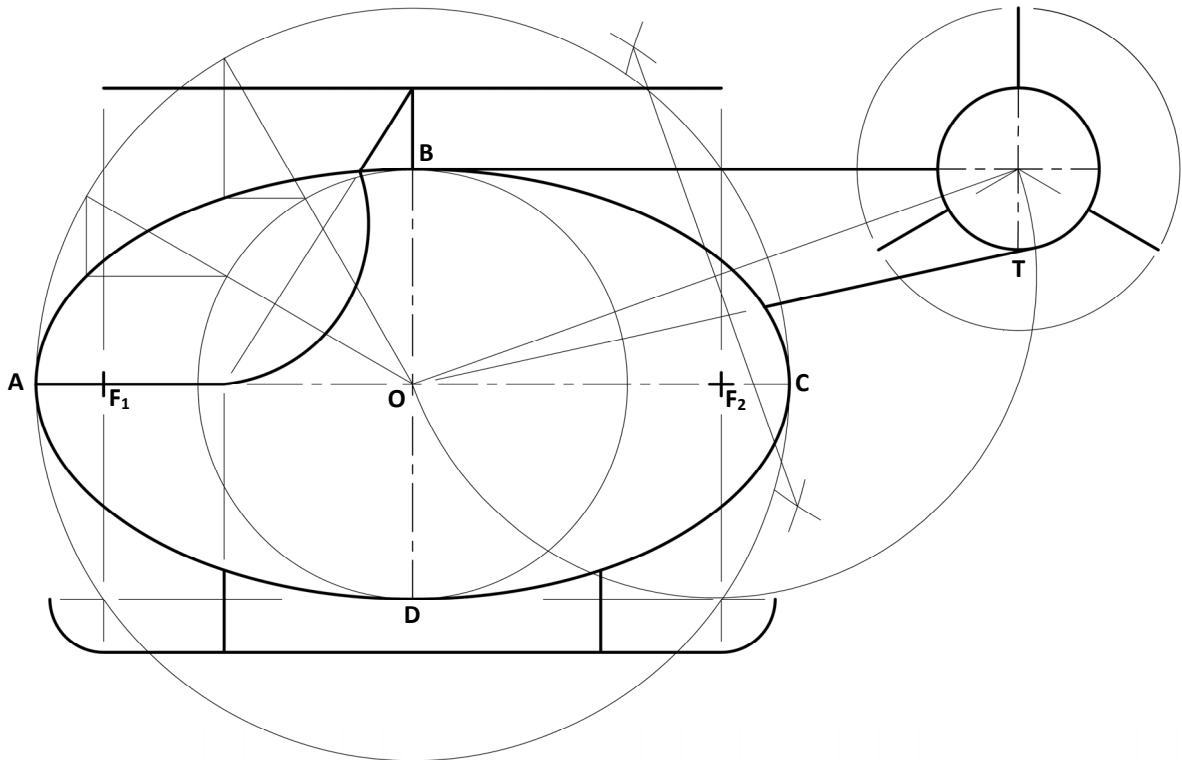
<p>Q3 (a)</p>	<p>6</p>	<p>Sketch (6 marks)</p>	
<p>Q3 (b)</p>	<p>2 2 8</p>	<p>Rotating points about O (2 marks) Locations (2 marks) 8 lines (8 marks)</p>	
<p>Q3 (c)</p>	<p>6 3</p>	<p>Parabola construction (1,1,2,2) Draw curve (3 marks)</p>	
<p>Q3 (d)</p>	<p>2 6 6</p>	<p>Prism</p> <p>Complete elevation (6 marks)</p> <p>True shape (6 marks)</p>	
<p>Page 4</p>	<p>41</p>		

Page 5 – Question 3

Q3 (e) (i) Elevation (14 marks)		
	4	4 vertical lines (4 x 1 mark)
	5	5 horizontal lines (5 x 1 mark)
	3	3 sloping line (3 x 1 mark)
	2	Arc (2 marks)
	14	
		
Q3 (e) (ii) Plan (8 marks)		
	4	Outline – 4 lines (4 x 1 mark)
	3	Internal lines – 3 lines (3 x 1 mark)
	1	Hidden detail (1 mark)
	8	
		
Q3 (e) (iii) End View (9 marks)		
	3	3 vertical lines (3 x 1 mark)
	6	6 horizontal lines (6 x 1 mark)
	9	
		
Q3 (e) (iv) Indexing (6 marks)		
	6	Correct indexing (6 x 1 mark)
	6	
		
	3	Presentation (3 marks)
Page 5	40	

Page 6 – Question 4

<p>Q4 (a)</p>	<p>6</p>	<p>(3 x 2 marks)</p>	
<p>Q4 (b)</p>	<p>3 4</p>	<p>Division of the line AB (3 marks)</p> <p>Circles (4 x 1 mark)</p>	
<p>Q4 (c)</p>	<p>4 6 3</p>	<p>Stepping correct width/depth distances (2 x 2 marks)</p> <p>3 surfaces (3 x 2 marks)</p> <p>Fold lines (3 x 1 mark)</p>	
<p>Q4 (d)</p>	<p>2 5</p>	<p>The sum of the Focal Radii $PF_1 + PF_2$ is equal to: The major axis (2 marks)</p> <p>Tangent construction (5 marks)</p>	
<p>Page 6</p>	<p>33</p>		

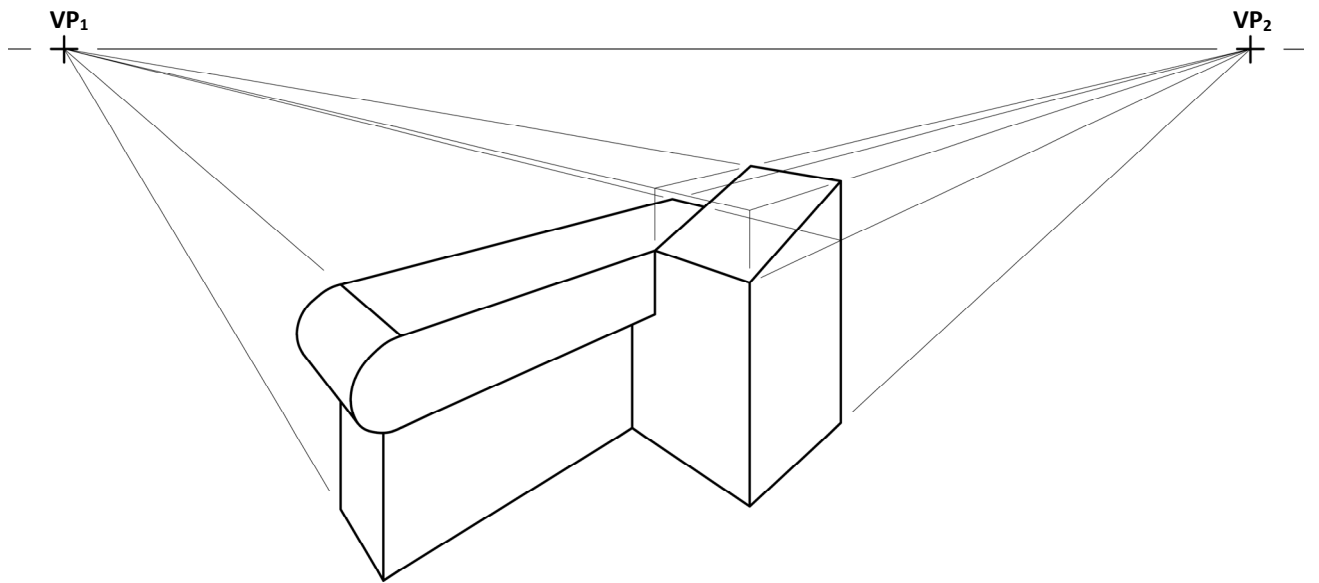


Q4 (e) (i)	Ellipse (16)	
	6	Draw minor circle (2 marks) , establish length of major axis (2 marks) , draw major circle (2 marks)
	6	Locating additional points on the curve (2, 2, 2)
	4	Draw Curve
	16	
Q4 (e) (ii)	Completion (30)	
	6	Skid: vertical lines (2 marks) , horizontal line (2 marks) , quadrants (2 x 1 mark)
	4	Rotor: vertical (1 mark) , sloped line (2 marks) , horizontal (1 mark)
	4	Window: R30 arc (3 marks) , horizontal line (1 mark)
	9	Tail: R30 (2 marks) , R15 (2 marks) , 3 lines (4 marks) , horizontal line (1 mark)
	7	Tangent construction (5 marks) , line (2 marks)
	30	
	3	Presentation (3 marks)
Page 7	49	

Page 8 – Question 5

Q5 (a)	3	Box A elevation (3 x 1 mark)	
	3	Box A plan (3 x 1 mark)	
	2	Correct location of box B (2 marks)	
	4	Box B elevation (4 x 1 mark)	
	4	Box B plan (4 x 1 mark)	
	16		
Q5 (b)	2	Correct number of boxes = 9 boxes (2 marks)	
	2		
Q5 (c)	2	Projection to given end view (2 marks)	
	4	Completion (4 x 1 mark)	
	6		
Q5 (d)	5	Outline: top and bottom (2 x 2 marks), sloped line (1 mark)	
	7	Internal: horizontal (2 x 1 mark), vertical (2 marks), sloped line (3 marks)	
	12		
Page 8	36		

Page 9 – Question 5



Q5 (e)	6	Complete base section – 3 lines (3 x 2 marks)
	6	
	8	Complete belt section (4 x 2 marks)
	8	
	4	Complete top section (2 x 2 marks)
	4	
	3	Presentation
Page 9	21	
Total 280		

Examiner Notes

Student Project marking scheme

Sheet 1					
2D & 3D Freehand sketches and annotations			Awareness of geometry		Presentation
20			12		8
Fair	Good	Excellent	Fair	Good	Excellent
0 – 7	8 – 14	15 – 20	0 – 4	5 – 8	9 – 12

Notes					

Sheet 2

Appropriately detailed 2D orthographic drawing			Main dimensions & appropriate 2D conventions			Presentation
20			12			8
Fair	Good	Excellent	Fair	Good	Excellent	
0 – 7	8 – 14	15 – 20	0 – 4	5 – 8	9 – 12	

Notes

Large empty rectangular area for notes.