

CAD Questions

A rendered CAD model of an egg timer is shown.

The model was made using **Bottom Up** modelling.

1 Explain the terms **Top Down** and **Bottom Up** modelling.

Top Down

Bottom Up

[2]

Technical graphics of the glass container and the supporting leg will be used by the manufacturer of the egg timer. These graphics are shown on the **reverse of this page**. The supporting leg is annotated with TOLERANCE A. The glass container is annotated with DATUM FACE B.

2 i Explain why **Tolerance A**, applied to the leg of the egg timer, is different from the general tolerance applied to the dimensions.

[1]

ii Describe two reasons for including **Datum Face B** in the technical graphics used by the manufacturer.

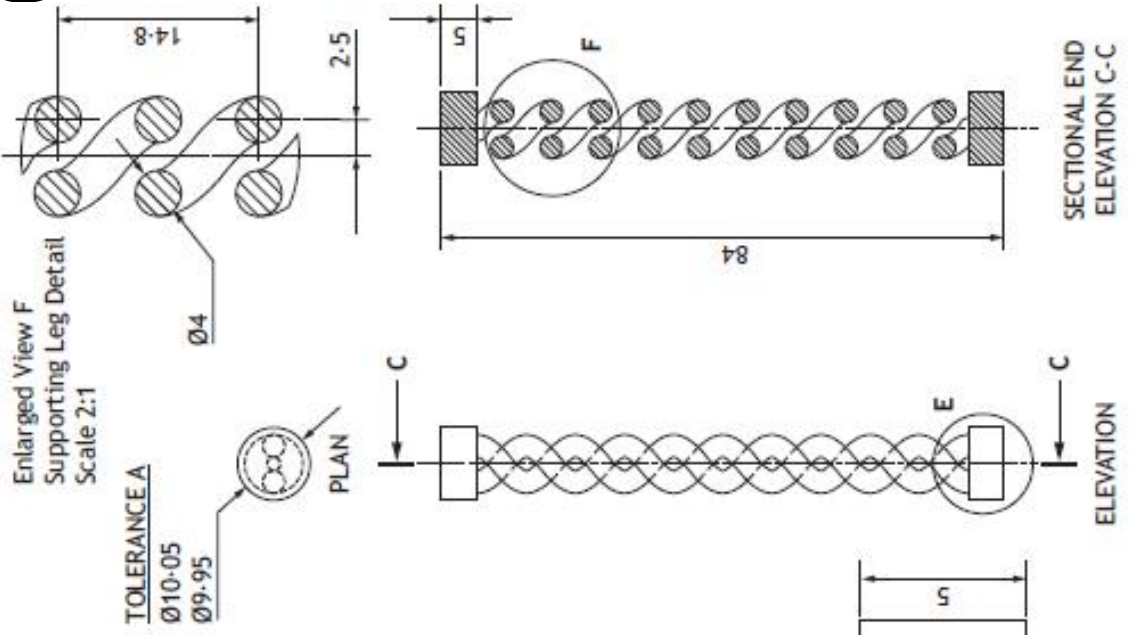
[2]

3 Describe the 3D CAD modelling techniques used to create the '**glass container**'. You must include the terms 'tangent constraint', 'mirror' and 'shell' in your answer. **Refer to the CAD drawings over**. Make reference to relevant dimensions from the drawings in your answer. You may use sketches to support your answer. [6]

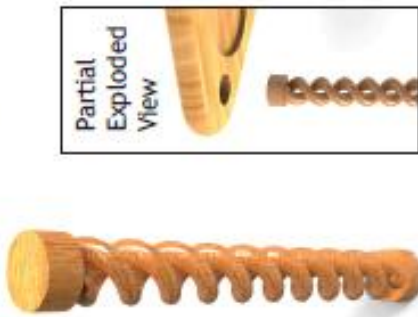
4. Describe the 3D CAD modelling techniques used to create the '**supporting leg**' of the egg timer. **Refer to the CAD drawings over**. Make reference to the dimensions from the drawings in your answer. You may use sketches to support your answer. [5]

Answers to Questions 3 and 4 can be completed on blank paper.

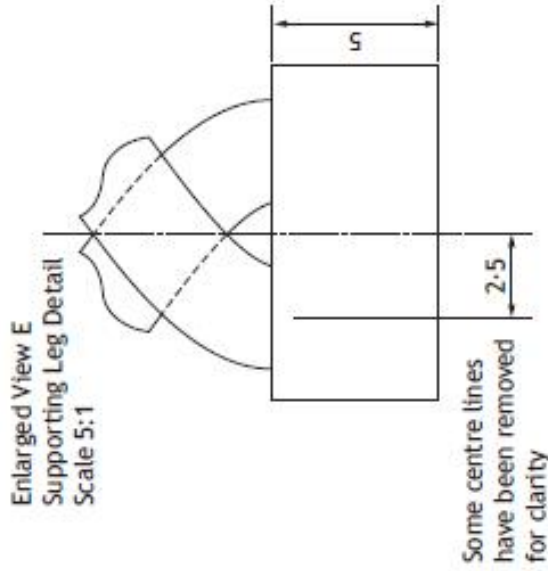




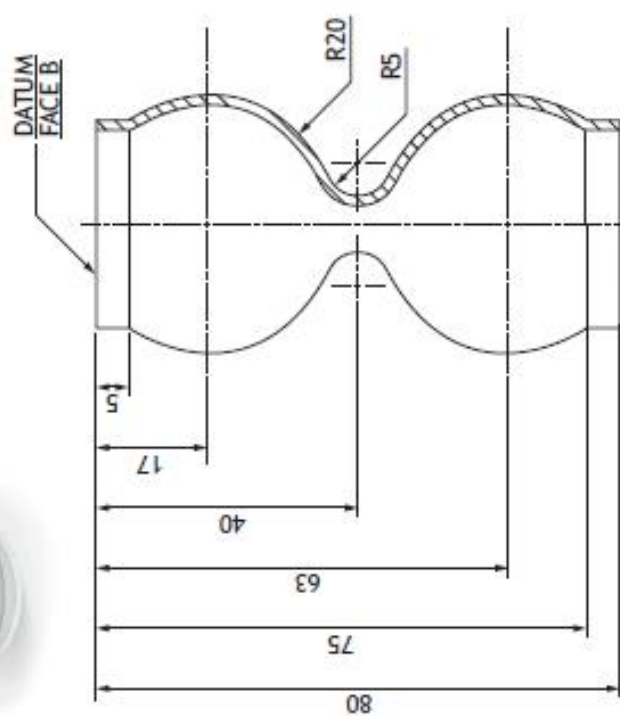
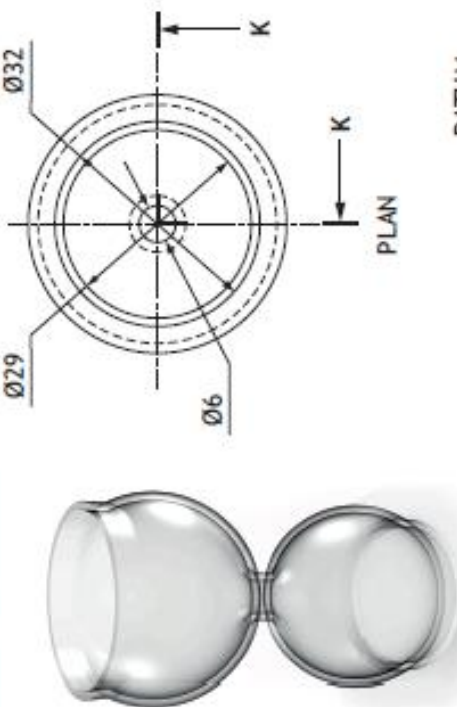
Supporting Leg



Enlarged View E
Supporting Leg Detail
Scale 5:1



Glass Container



Egg Timer Part Drawings	Advanced Higher Graphic Communication	Scale: 1:1
Drawing Number 1	All dimensions in mm	Tolerance ± 0.1
		Date: 10/10/2018

