

Design & Technology (Product Design)

DTBase[©]

OCR A-Level

Communicating Construction of Design Solutions (4.1b)

Materials required for questions

- Pencil
- Rubber
- Calculator

Instructions

- Use black ink or ball-point pen
- Try answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- For the multiple choice questions, circle your answer

Advice

- Marks for each question are in brackets
- Read each question fully
- Try to answer every question
- Don't spend too much time on one question

Good luck!

Q1. A manufacturer rejects a designer’s working drawing because it lacks “sufficient construction detail.” Which omission is most likely responsible?

- A Aesthetic shading
- B Hidden detail lines and tolerances
- C A rendered colour version of the product

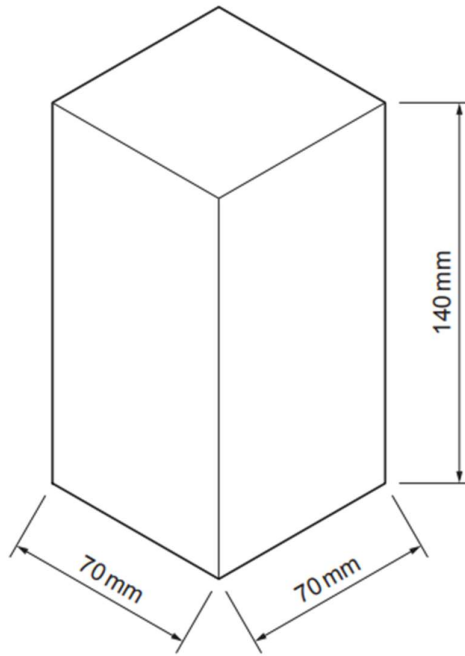
Q2. A designer creates a digital visualisation of a product for a client. The client later complains that the final product “looks different” from the render. What is the *most plausible* cause?

- A The render used physically-inaccurate lighting/material properties
- B The designer forgot to add branded logos
- C The render didn’t include decorative textures

Q3. A wiring schematic for an interactive display is difficult for the engineering team to follow. Which issue would be the *most serious* contributor?

- A Components are shown without standardised electrical symbols
- B The schematic is printed in black and white
- C The diagram is labelled in uppercase text

Q4. The image below shows the cuboid cardboard packaging for the reed diffuser.



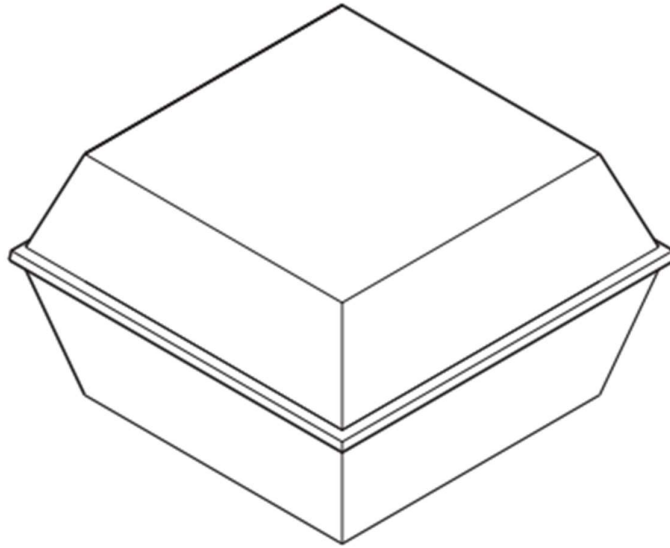
(not to scale)

The cuboid cardboard packaging has four sides, a top and a bottom.

Use the information from the image to draw a surface development (net) for the cuboid cardboard packaging.

Include glue tabs in your design. **(5 marks)**

Q5. The image below shows an isometric drawing of a burger carton shape.



Complete the third angle orthographic projection drawing of the burger carton shown in the image. **(5 marks)**

Answers

Q1. B

Q2. A

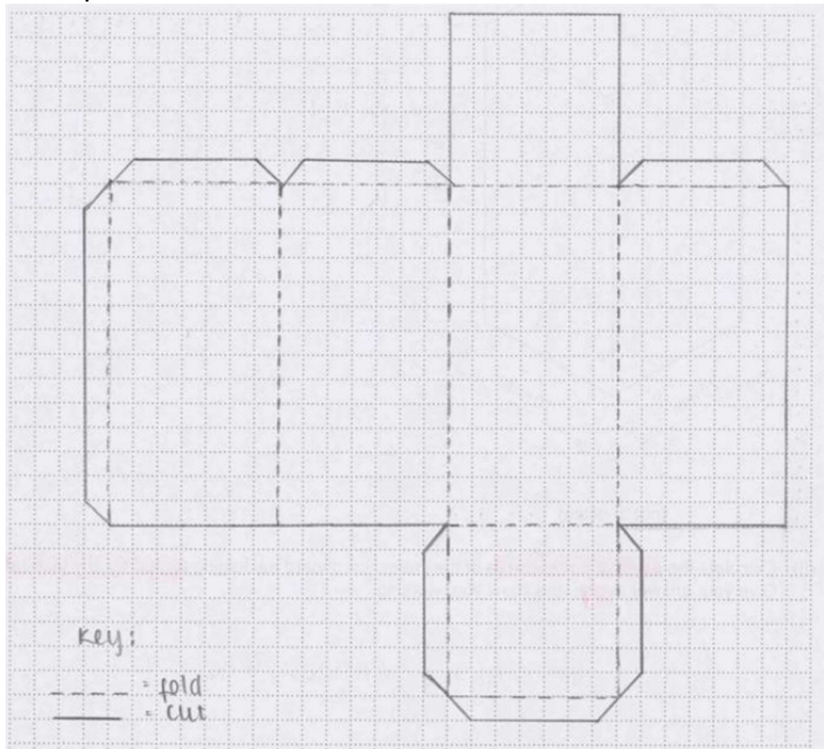
Q3. A

Q4.

Award five marks as follows:

- One mark - all 6 panels drawn (any workable solution).
- One mark - correct width of top/bottom and width of panels 70mm.
- One mark - correct height of panels 140mm.
- One mark – accurate glue tab(s) indicated on net to create a workable net.
- One mark – accuracy of drawing. If panels are drawn separately max 3 marks

Example below:



Q5.

Award five marks as follows:

- One mark for correct position on page in relation to front and side view\ orthographic layout.
- One mark for correct measurements without detail of lip
- One mark for correct plan without detail of lip
- One mark for detail of lip.
- One mark for line quality.

