



**Cambridge International Examinations**  
Cambridge Ordinary Level

\* 0 1 2 3 4 5 6 7 8 9 \*

**CDT: DESIGN AND COMMUNICATION**

**7048/01**

Paper 1

**For Examination from 2017**

SPECIMEN PAPER

**2 hours 30 minutes**

Candidates answer on the three inserted question sheets.

Additional Materials: Standard drawing equipment

**READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name in the spaces on all printed question sheets.  
Draw and write your answers in the spaces provided on the questions sheets.  
Do not use staples, paper clips, glue or correction fluid.  
DO **NOT** WRITE IN ANY BARCODES.

**Section A**

Answer the question in Section A.

**Section B**

Answer any **two** questions from Section B.

All construction and projection lines must be clearly shown.  
All dimensions are in millimetres.  
The total marks for this paper is 80.  
The number of marks is given in brackets [ ] at the end of each question or part question.

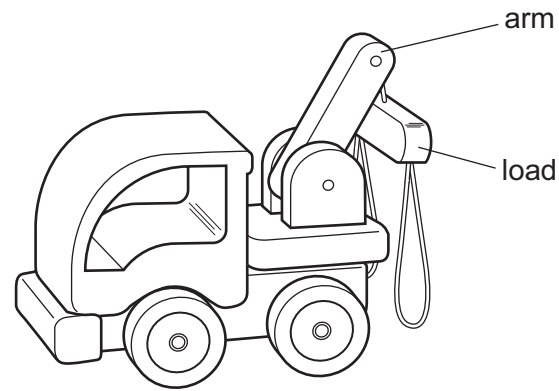
This document consists of an A3 cover booklet and **3** inserted A3 sheets.



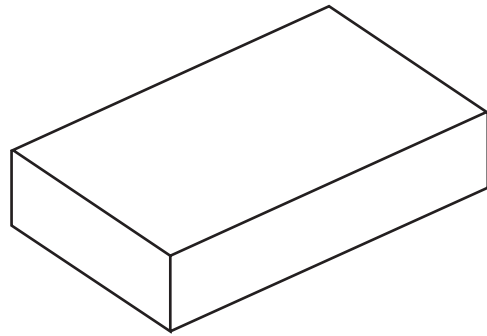
**Section A**

Answer question **A1**.

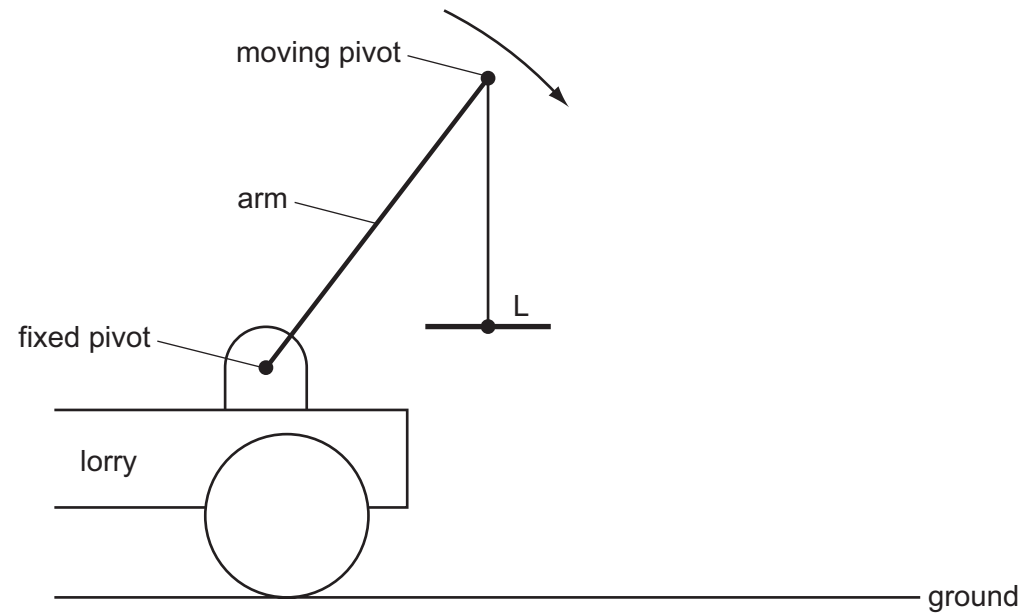
**A1** A wooden toy lorry is shown below.



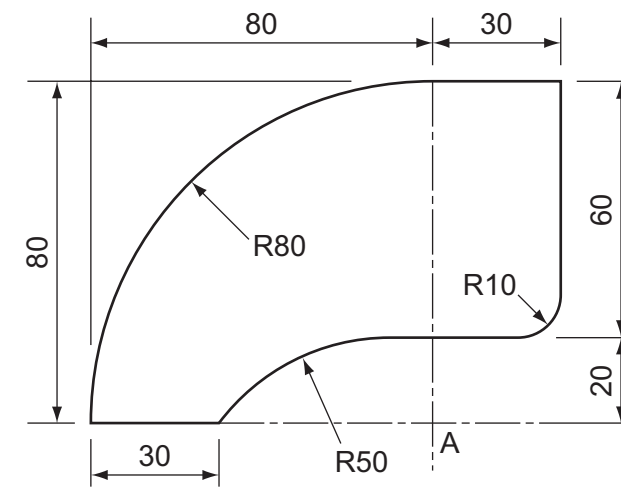
- (a) One of the blocks of solid wood used to make the toy lorry is shown below. Render the block to make it appear like solid wood. [3]



- (b) Complete the schematic diagram below to show the path of the load (L) as the arm swings around and lowers it to the ground. [6]

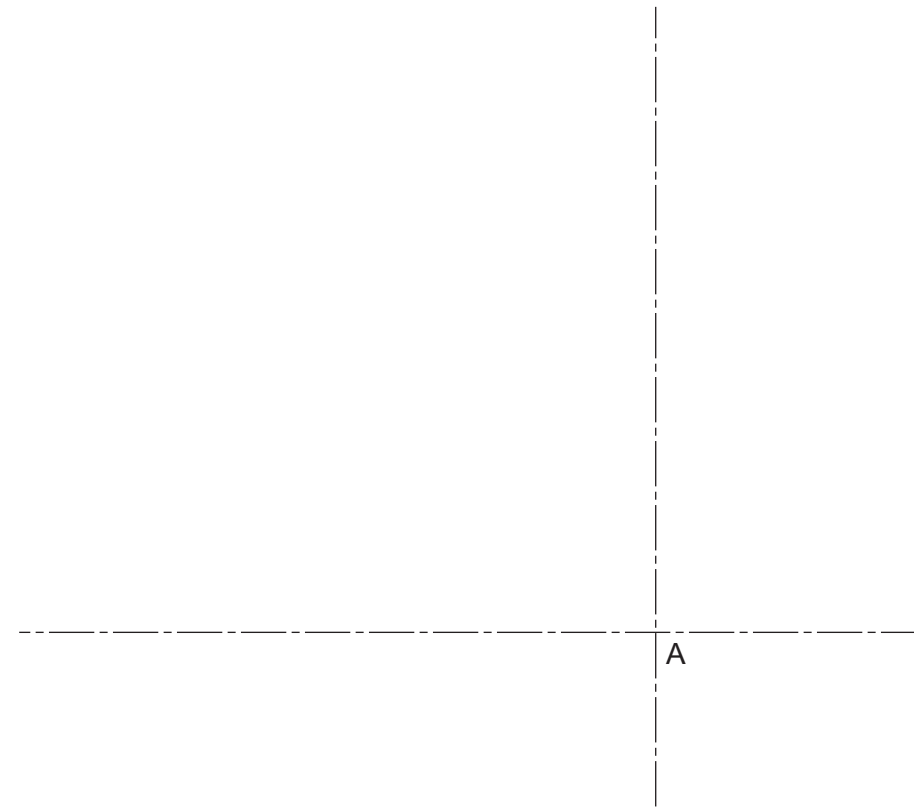


- (c) A sketch of the lorry window is shown below.



lorry window

Accurately construct the drawing of the shape of the window on the centre lines below. [8]



(d) A working drawing is required to make the wooden toy.

(i) Complete the name below to show the type of working drawing used.

..... angle orthographic projection [1]

(ii) Name **two** pieces of information the working drawing will show.

1. .... [1]

2. .... [1]

(e) Sales of the toy lorry are shown in the table below.

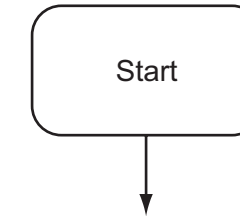
	2012	2013	2014	2015	2016
Sales	6000	8000	10 000	9000	9500

In the space below draw a three-dimensional bar chart to show the sales of the toy lorry over the five-year period. Use colour and labels to enhance the appearance of the bar chart. [5]

(f) The stages in putting the wheels on the lorry are shown below.

1. Put one wheel on an axle
2. Push the axle through the hole in lorry
3. Put the second wheel on the axle
4. Check the wheels spin freely

Complete the flowchart below to show the stages in putting one axle and two wheels on the toy lorry. [5]

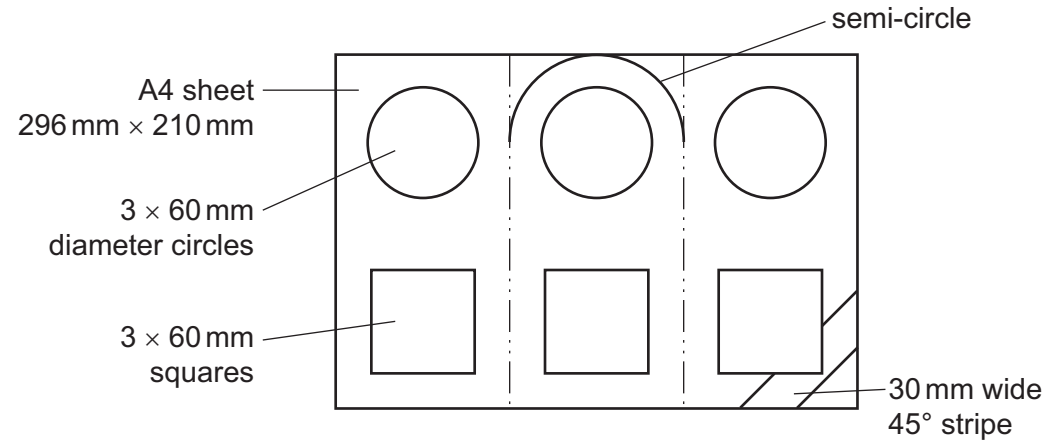


**Section B**

Answer any **two** questions from this section.

**B2** The sketch on the right shows the layout for a menu for a restaurant. The menu is printed on A4 paper and folded into three equal parts.

(a) Complete the scale 1:2 drawing below to show the layout of the menu. [9]



(b) (i) Name **one** printing method that could be used to produce 10 000 copies of the menu.

..... [1]

(ii) Explain one way of evaluating the effectiveness of the new menu.

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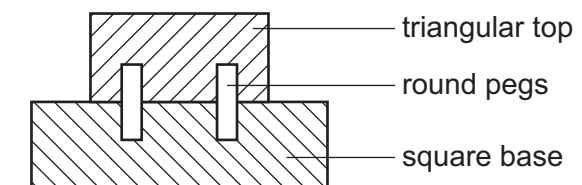
..... [2]

(c) A clear acrylic base is to be used to hold the menu in a triangular shape so that it can stand on a table.

Complete the instructions below to show how the acrylic base is folded into the shape shown in stage 3. [6]

Stage 1	Cut acrylic to shape and mark out folds  ——— cut line - - - - - fold line	
Stage 2	Fold acrylic at 90°	
Stage 3	Fold to form an equilateral triangle	

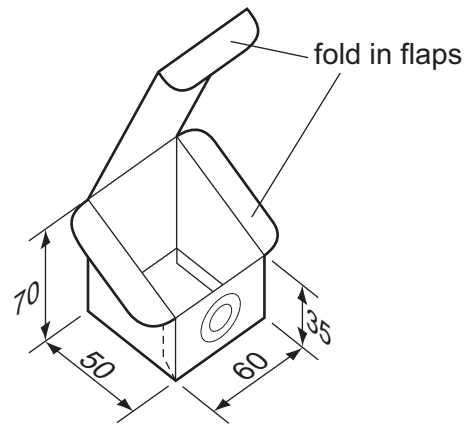
(d) A two-part wooden former is to be produced so that 50 identical acrylic bases can be made. A sectional view of the former is shown below.



In the space below draw an exploded pictorial sketch of the former. [7]

**B3** A sketch of a design for a cardboard package for sweets is shown below.

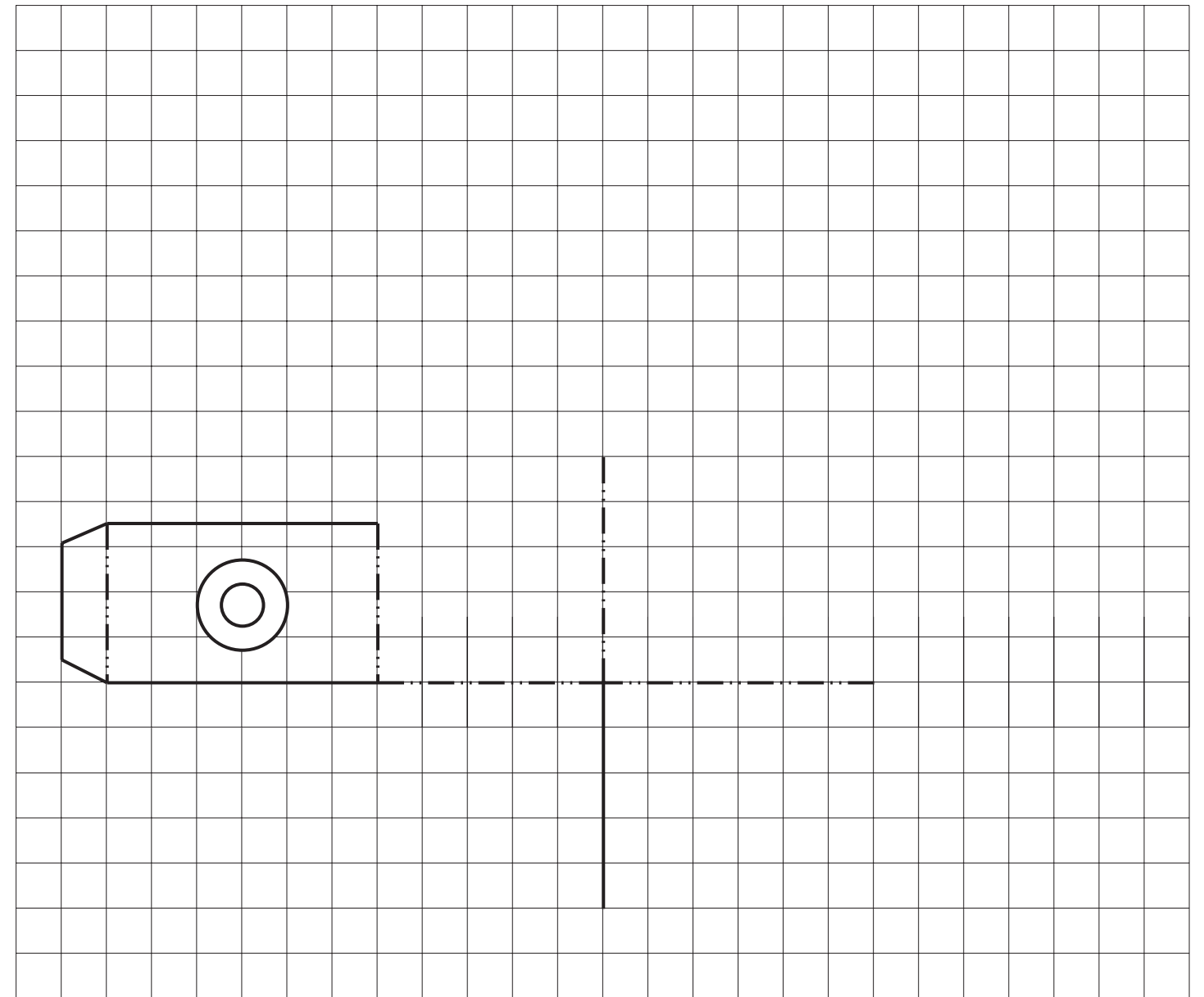
(a) Complete the drawing of the development (net) of the package on the given grid to the right. Clearly show all fold lines, glue tabs and fold in flaps. [15]



(b) Complete the table below to show the method of making a prototype of the card package.

Material:	Card
Drawn out using:	1. Pencil 2. .... [1]
Cut out using:	1. Craft knife 2. .... [1] 3. .... [1]
Colour added using:	1. .... [1]

Scale: 10 mm to 1 square



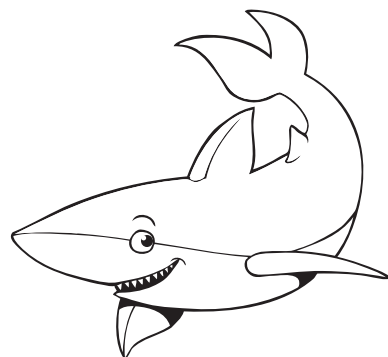
(c) The card package for sweets is to be displayed on an acrylic stand. The display stand must:

- stand on the counter;
- hold one package of sweets;
- show that a range of sweets is available.

In the space below use sketches and notes to show an idea for the acrylic display stand. [6]

**B4** Three teams called the Lions, Eagles and Sharks are to take part in a competition. Team members are identified by a badge with a border, image and the team name on it.

(a) Complete the drawings on the right to show the badge for each team. An image of a shark is shown below. The badge for the Lions is complete. [8]



(b) Describe a method of producing 10 monochrome copies of each badge design on A4 paper.

.....

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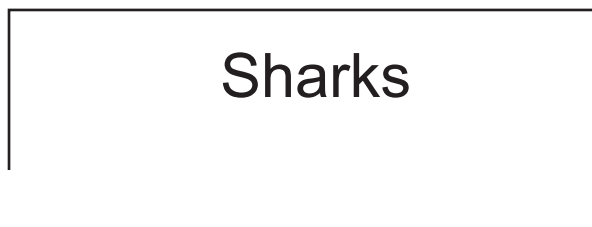
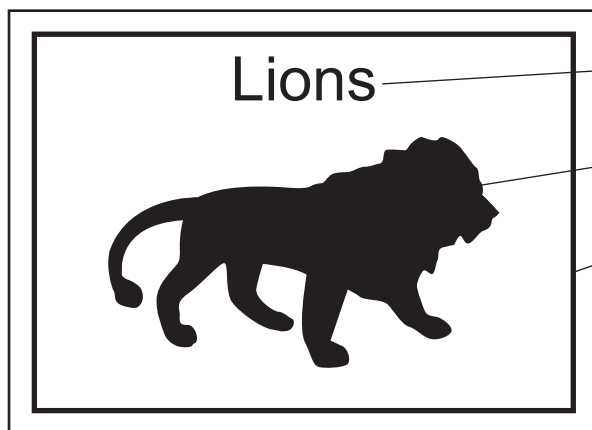
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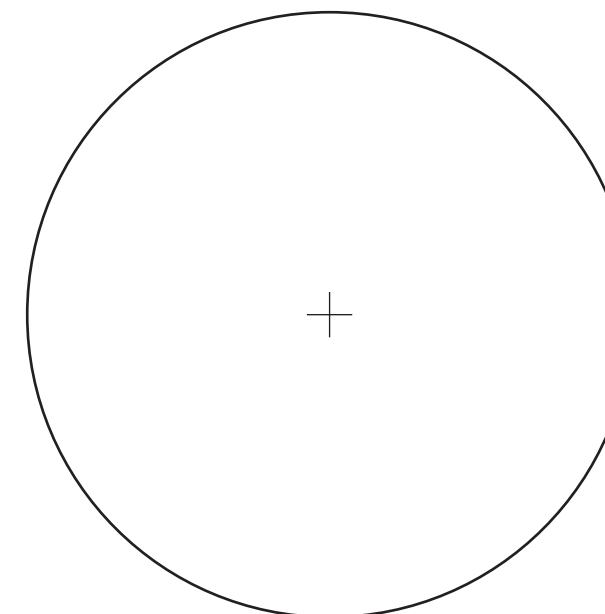
(c) Use sketches and notes to show the advantages of using self-adhesive vinyl for the badges. [4]



(d) The results of the competition are shown in the table below. A total of 18 games are played.

	First	Second	Third
Lions	6	10	2
Eagles	8	4	6
Sharks	4	4	10

(i) Use the competition results to draw a pie chart in the circle below to show the number of **first places** achieved by each team. Use colour and labels to enhance your chart. [5]



(ii) In the space below construct an isometric drawing of one sector of the pie chart. [5]

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