

FOR OFFICIAL USE

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Q1		Q4	
Q2		Q5	
Q3		Q6	

Total

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0600/402

NATIONAL QUALIFICATIONS 2011
 FRIDAY, 27 MAY
 10.20 AM – 11.20 AM

CRAFT AND DESIGN
STANDARD GRADE
 General Level

Fill in these boxes and read what is printed below.

Full name of centre

--

Town

--

Forename(s)

--

Surname

--

Date of birth

Day Month Year

--	--	--	--	--	--

Scottish candidate number

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Number of seat

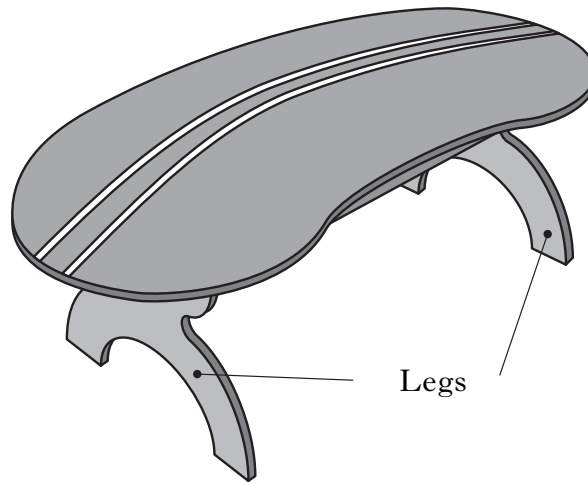
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- 1 Answer all the questions.
- 2 Read every question carefully before you answer.
- 3 Write your answers in the spaces provided.
- 4 Do **not** write in the margins.
- 5 All dimensions are given in millimetres.
- 6 Before leaving the examination room you must give this book to the Invigilator. If you do not, you may lose all the marks for this paper.



ATTEMPT ALL QUESTIONS

1. A children's bathroom step is shown below.



(a) The step was made from a manufactured board.

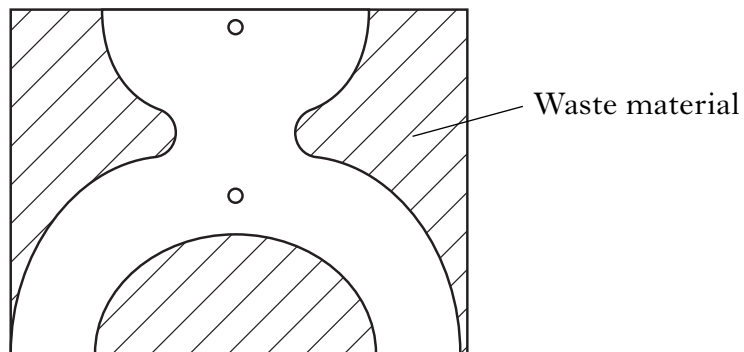
(i) State the name of a suitable manufactured board.

1
0

(ii) State **one** reason for using a manufactured board.

1
0

(b) A template was used to mark the outline of the legs as shown below.



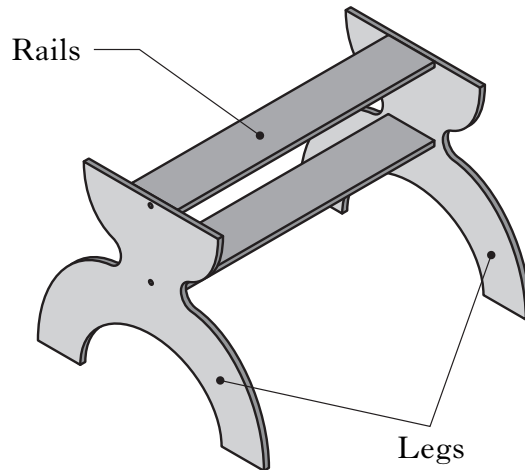
State **two** advantages of using a template.

Advantage 1 _____

Advantage 2 _____

1
0
1
0

1. (continued)



(c) The legs were glued and screwed to the rails during assembly.

(i) State the name of a suitable glue.

1
0

(ii) State the name of this type of wood screw.



1
0

(iii) State **one** reason for using a wood screw with this type of head.

1
0

(d) An abrasive paper was used during manufacture.

State the name of a suitable abrasive paper.

1
0

(e) Paint was applied as a finish.

State **two** reasons for using a paint finish.

Reason 1 _____

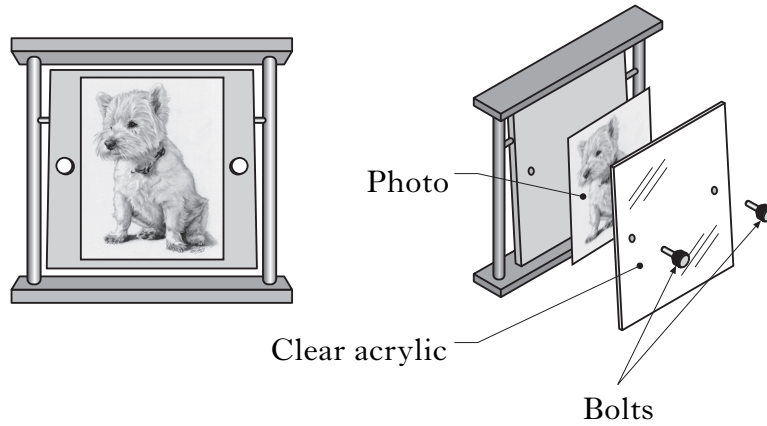
1
0

Reason 2 _____

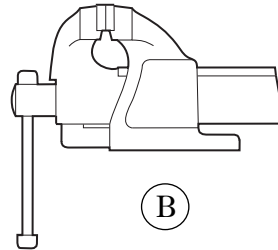
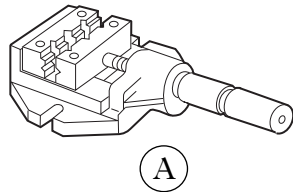
1
0

[Turn over

2. The photo frame below was designed by a pupil.



(a) The two vices shown below were used in the manufacture of the photo frame. State the name of each vice.



Vice (A) _____

Vice (B) _____

(b) Clear acrylic was used in the manufacture of the photo frame. Complete the sequence of operations for finishing the edges.

1 Cross file the edge flat

2 _____

3 Use “wet and dry” paper

4 _____

(c) A pedestal drill was used during manufacture.

(i) State **two** safety checks that should be made to the **machine** before switching it on.

Check 1 _____

Check 2 _____

(ii) State a method of preventing the acrylic from cracking when drilling.

1
0
1
0

1
0

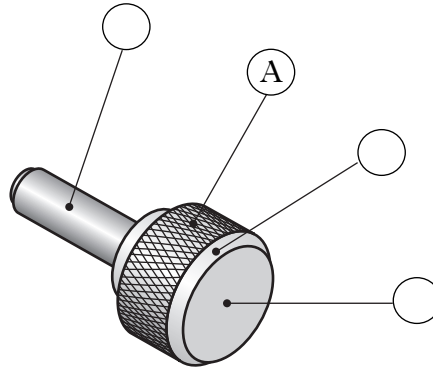
1
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1
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2. (continued)

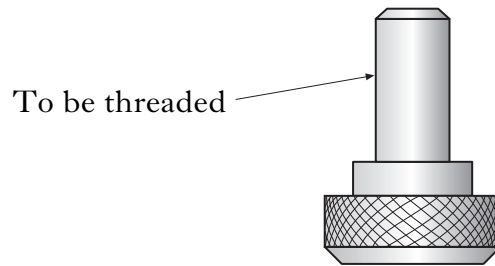
(d) (i) The bolt shown below was manufactured using a metal lathe. Indicate on the diagram below where the following processes have been carried out. Process (A) has been done for you.

- (A) Knurling (B) Parallel Turning (C) Chamfering (D) Facing

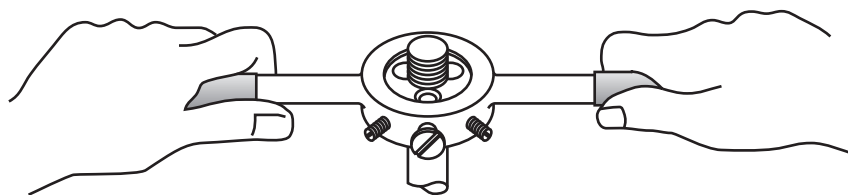


(ii) State the reason for carrying out process (A).

(e) The bolt is to be threaded.



(i) The tool used to cut the thread is shown below.



State the name of this tool.

(ii) State a method of ensuring a high quality thread is cut.

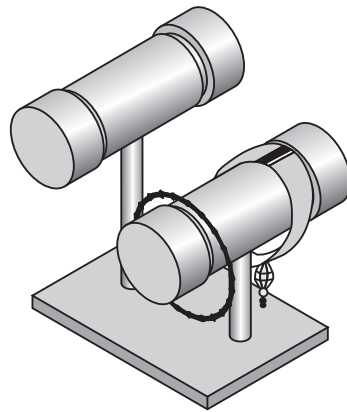
1
0
1
0
1
0

1
0

1
0

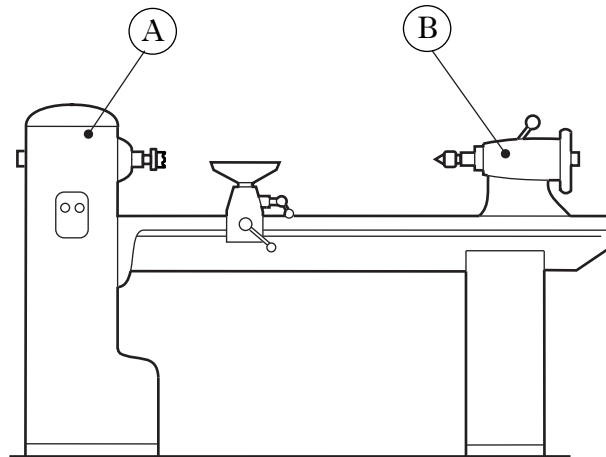
1
0

3. The jewellery display stand shown below was made by an enterprise class.



(a) The stand is to be made of a hardwood.
State the name of a suitable hardwood.

(b) The machine shown below was used during manufacture of the jewellery display stand.



State the name of Part (A) and Part (B) .

Part (A) _____

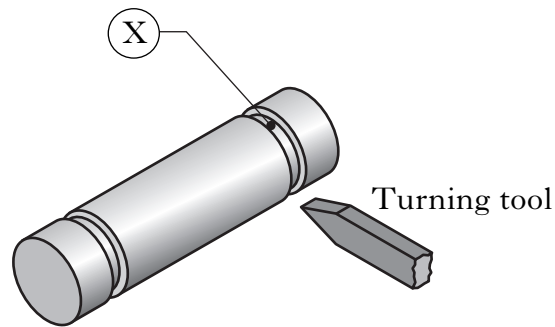
Part (B) _____

1
0

1
0
1
0

3. (continued)

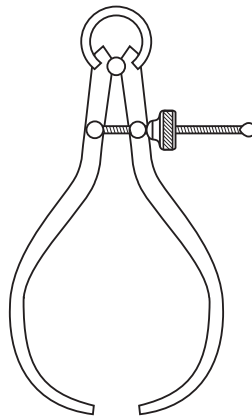
(c) Part of the jewellery stand is shown below.



State the name of the turning tool used to make the groove at (X).

1
0

(d) The tool shown below was used during the manufacture of the stand.

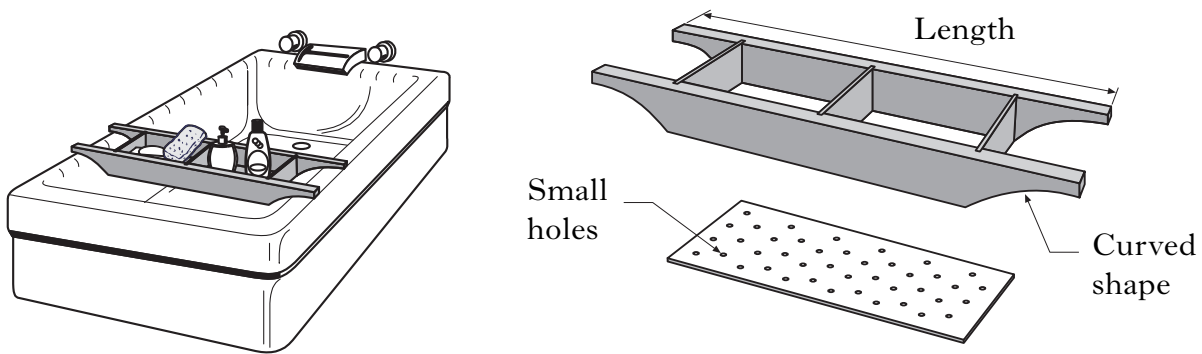


State the name of this tool.

1
0

[Turn over

4. A wooden bath caddy is shown below.



(a) (i) The bath caddy had two important design features.

State a functional reason for the design features listed below.

Small holes _____

Curved shape _____

(ii) State a reason why the length was important to the design of the bath caddy.

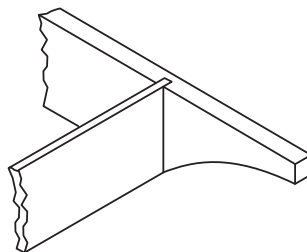
(b) A choice of tools was available to cut the curved shape.

State the name of a suitable

(i) machine tool _____

(ii) hand tool. _____

(c) (i) The joint shown below was used in the manufacture of the bath caddy.



State the name of the joint.

1
0

1
0

1
0

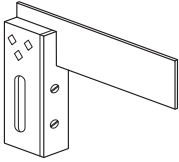
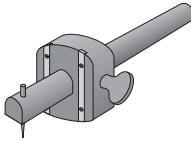
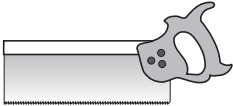
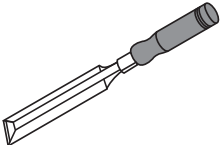
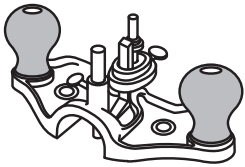
1
0

1
0

1
0

4. (c) (continued)

(ii) The incomplete table below shows stages and tools used to manufacture the joint. Complete the table by filling in the blank stages and tool names.

Stage	Tool
Marking lines at 90° to an edge on wood	 Name: _____
_____ _____	 Name: _____ Marking Gauge
Cutting depth of joint	 Name: _____
Removing waste material from the joint	 Name: _____
_____ _____	 Name: _____

1
0

1
0

1
0

1
0

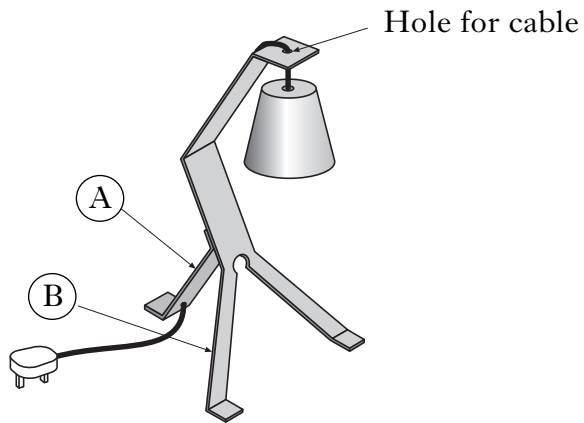
1
0
1
0

(d) A **clear** varnish was applied to the bath caddy.

State a reason for applying a **clear** finish.

1
0

5. A pupil's design for a desk lamp is shown below.



(a) Safety is an important design factor when designing a lamp.

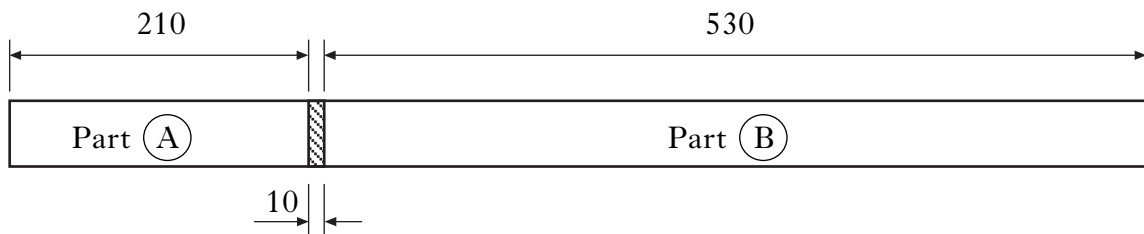
State **two** safety issues that could be considered when designing a lamp.

1 _____

2 _____

1
0
1
0

(b) The lamp is made from a single length of 1.5 mm thick mild steel as shown below.



State the total length of steel required to make one lamp.

1
0

5. (continued)

- (c) The tools shown below were used during the manufacture of the lamp.
State the name and purpose of each tool.



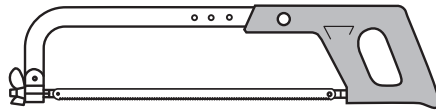
Name _____

Name _____

Purpose _____

Purpose _____

2
1
0
2
1
0

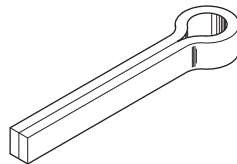


Name _____

Purpose _____

2
1
0

- (d) During the manufacture of the lamp the following tool was used.



State the name of the tool. _____

1
0

- (e) Part (A) and part (B) are made from mild steel. Other than gluing, state **two** methods of joining part (A) and part (B).

Method 1 _____

Method 2 _____

1
0
1
0

- (f) During the evaluation of the lamp, acrylic was suggested as an alternative material to mild steel.

State **one** advantage and **one** disadvantage of using acrylic.

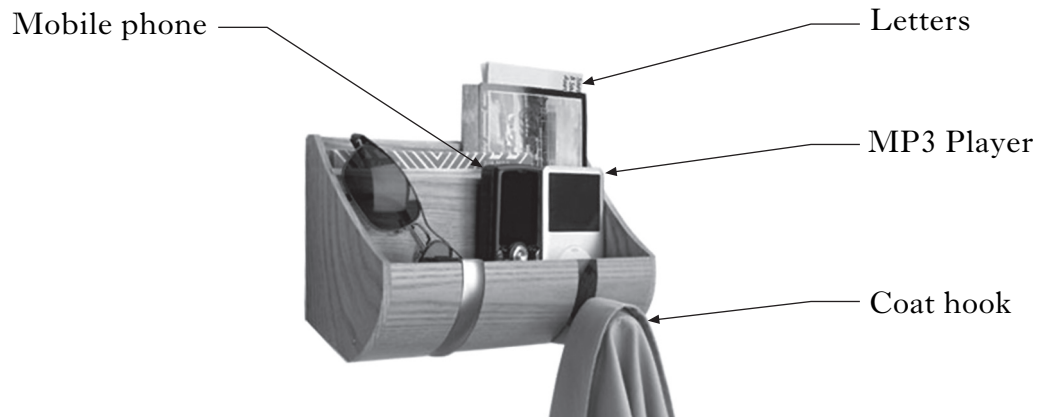
Advantage _____

Disadvantage _____

1
0
1
0

[Turn over for Question 6 on Page twelve

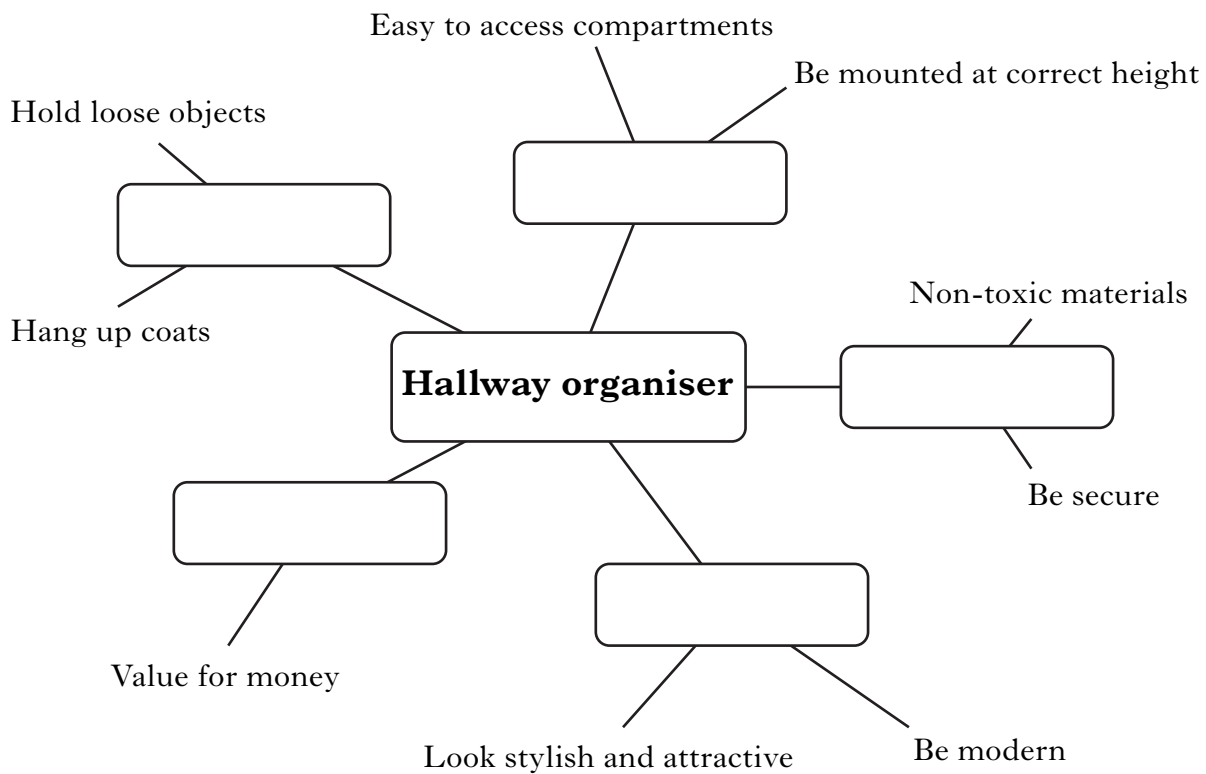
6. A wall mounted hallway organiser is shown below.



During the analysis the designer considered the following design factors.

Ergonomics Safety Economics Aesthetics Function

Complete the diagram below using each design factor **once**.



1
0
1
0

1
0

1
0
1
0

[END OF QUESTION PAPER]