

FOR OFFICIAL USE



National Qualifications  
ADDITIONAL QP RESOURCE

Mark

**X862/75/01**

**Practical Woodworking**

Duration — 1 hour



Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Number of seat

Date of birth

Day

Month

Year

Scottish candidate number

**Total marks — 60**

Attempt ALL questions.

Write your answers clearly in the spaces provided in this booklet. Additional space for answers is provided at the end of this booklet. If you use this space you must clearly identify the question number you are attempting.

Use **blue** or **black** ink.

Before leaving the examination room you must give this booklet to the Invigilator; if you do not, you may lose all the marks for this paper.



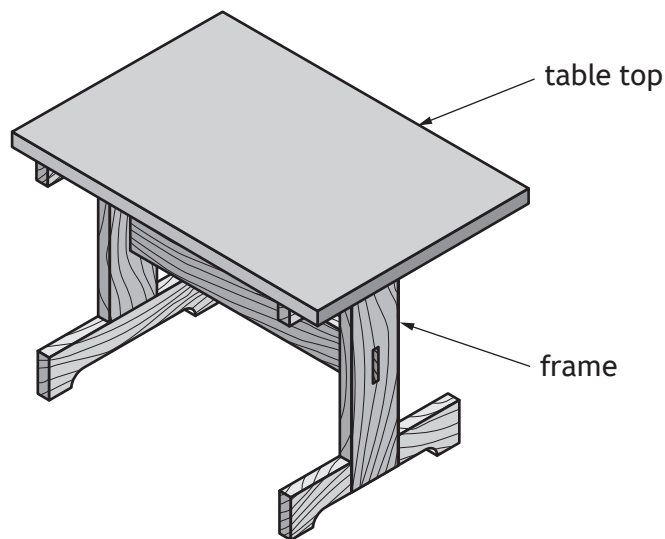
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**Total marks — 60**  
**Attempt ALL questions**

1. An eco-friendly company are to make the table shown below.  
The frame is made from solid timber and the table top from manufactured board.



- (a) (i) Explain with reference to sustainability, why a softwood would be a good choice of material for the frame. 1

\_\_\_\_\_

\_\_\_\_\_

- (ii) State two advantages of using manufactured board rather than solid timber for the table top. 2

Advantage 1 \_\_\_\_\_

\_\_\_\_\_

Advantage 2 \_\_\_\_\_

\_\_\_\_\_

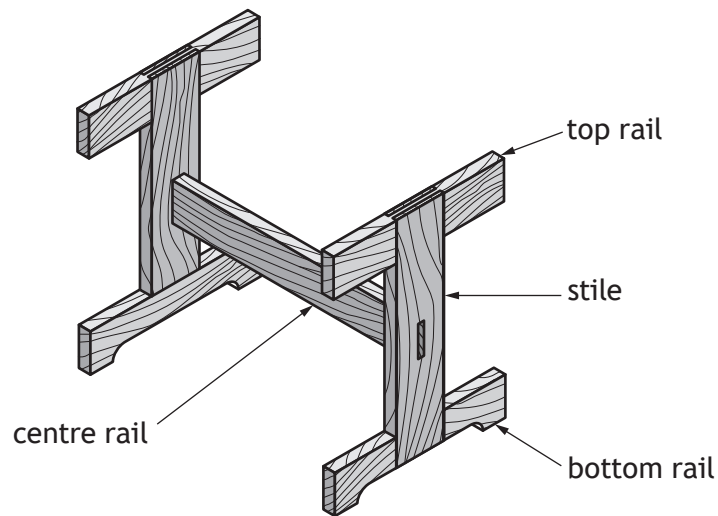
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\* X 8 6 2 7 5 0 1 0 3 \*

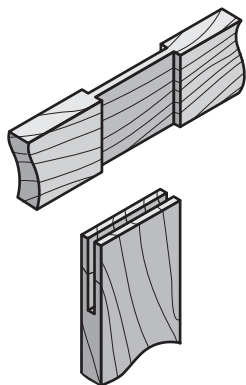
1. (continued)

Component parts of the frame are shown below.

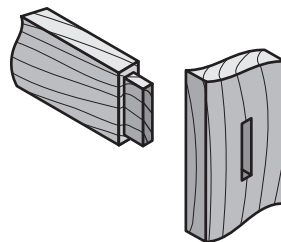


(b) Name the three joints shown below, which are used in the manufacture of the frame.

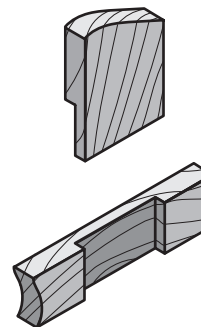
3



joint A



joint B



joint C

Joint A \_\_\_\_\_

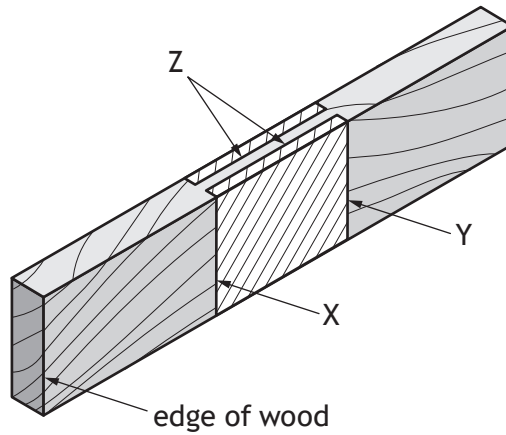
Joint B \_\_\_\_\_

Joint C \_\_\_\_\_



1. (continued)

The marking out of the joint on the top rail is shown below.



- (c) Information about the marking out process is given below, with some missing words.

Complete the sentences below, with the correct words.

- (i) The distance from the edge of the wood to line X is measured using a steel rule and marked around the wood using a pencil and a

\_\_\_\_\_ .

1

- (ii) The distance between lines X and Y would be the breadth of this component part.

\_\_\_\_\_

1

- (iii) The tool used to mark both lines Z, at the same time, is a

\_\_\_\_\_ .

The spurs on this tool would normally be set to \_\_\_\_\_ of the thickness of the top rail.

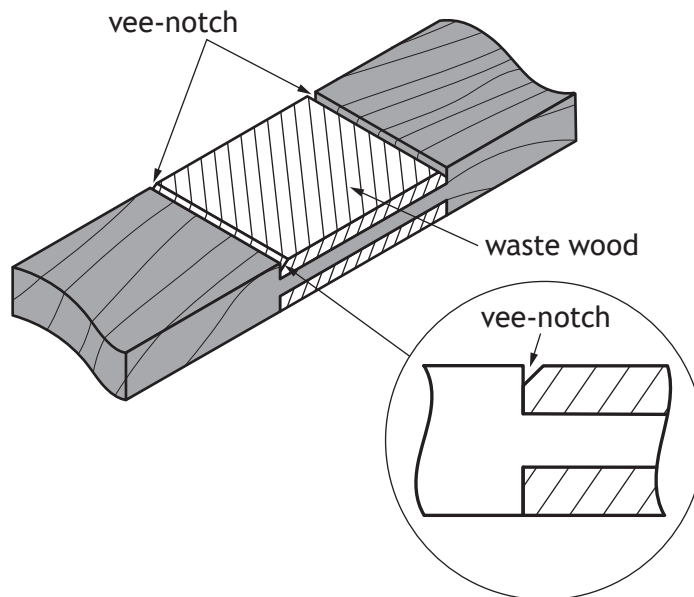
2

[Turn over



1. (continued)

(d) Some of the stages for removing waste wood from the top rail are shown below.



Vee-notches are cut using a marking knife and chisel, before sawing.

(i) State a reason why vee-notches are cut before sawing.

1

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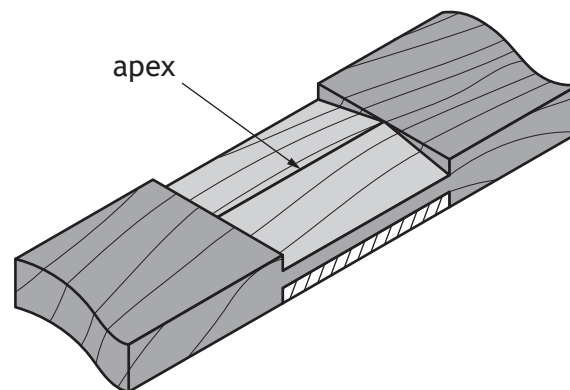
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\* X 8 6 2 7 5 0 1 0 6 \*

## 1. (d) (continued)

Part of the waste wood is removed, as shown below.



- (ii) Explain why the wood is cut at an angle from both sides to create an apex. Give two reasons in your response.

2

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[Turn over



\* X 8 6 2 7 5 0 1 0 7 \*

## 1. (d) (continued)

The chisel shown below is used to remove the initial waste wood from the top rail.

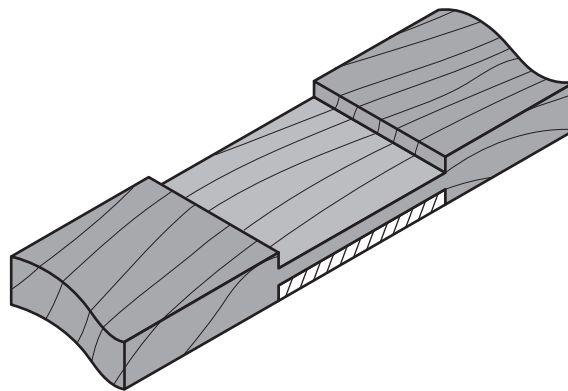


(iii) Name this type of chisel.

1

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The next stage is to complete the removal of the waste wood.



(iv) Name a hand tool (other than a chisel) used to ensure the surface is level.

1

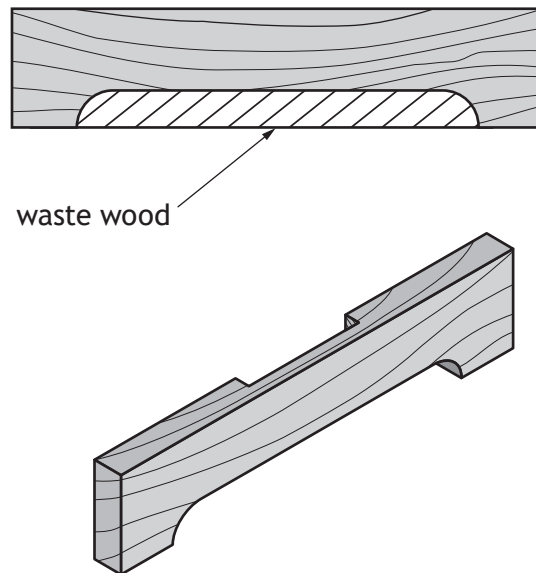
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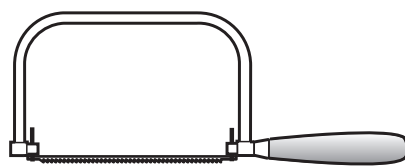
1. (continued)

- (e) The bottom rail of the frame shown below, is shaped by removing the waste wood.



- (i) Name the following tools used when removing the waste wood.

2



tool A



tool B

Tool A \_\_\_\_\_

Tool B \_\_\_\_\_

- (ii) State three checks you would make to the blade of tool A before using it.

3

Check blade is \_\_\_\_\_

Check blade is \_\_\_\_\_

Check blade is \_\_\_\_\_

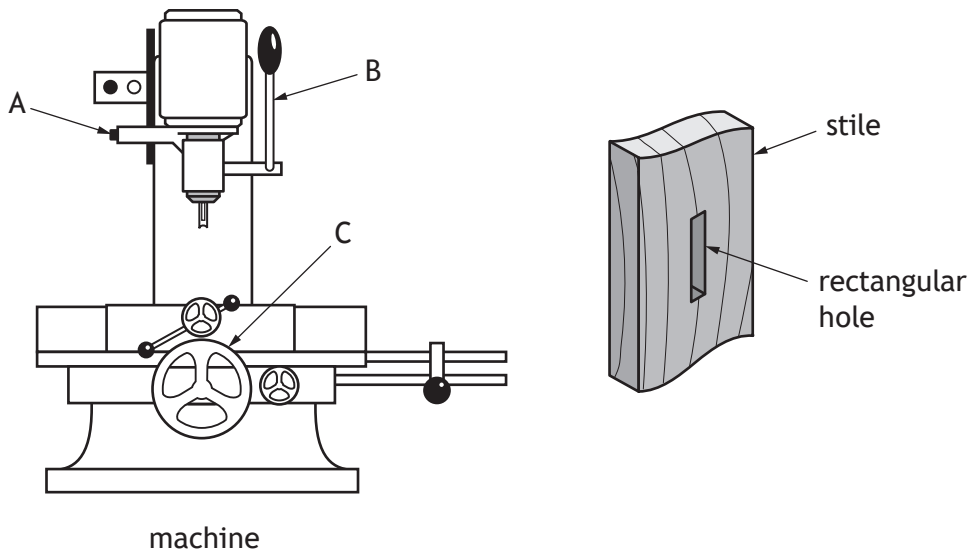
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\* X 8 6 2 7 5 0 1 0 9 \*

1. (continued)

(f) The machine shown below is used to cut the rectangular hole in the stile.



State the purpose of parts A, B and C.

3

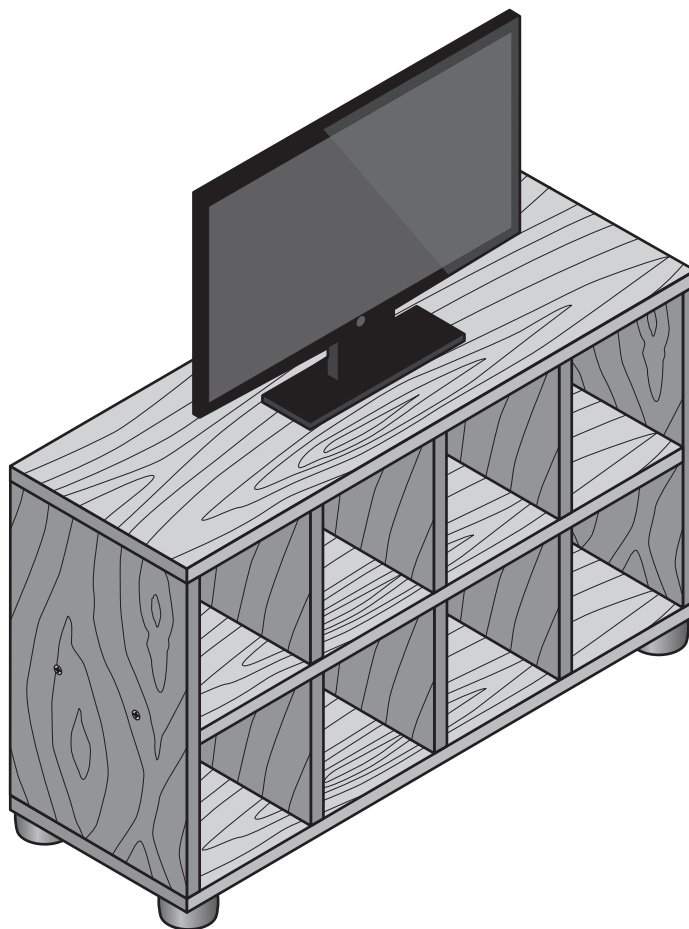
Part A \_\_\_\_\_

Part B \_\_\_\_\_

Part C \_\_\_\_\_



2. A unit used to support a TV is shown below.



- (a) The unit is built from three types of manufactured board.

Type 1 is made by gluing strips of softwood together, edge to edge, and then covering with a veneer.

- (i) Name this type of manufactured board.

1

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Type 2 is formed by mixing wood chips and shavings with glue, compressed into sheets before being covered in veneer.

- (ii) Name this type of manufactured board.

1

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Type 3 is a lightweight, flexible, inexpensive board which is smooth on one side and rough on the other.

- (iii) Name this type of manufactured board.

1

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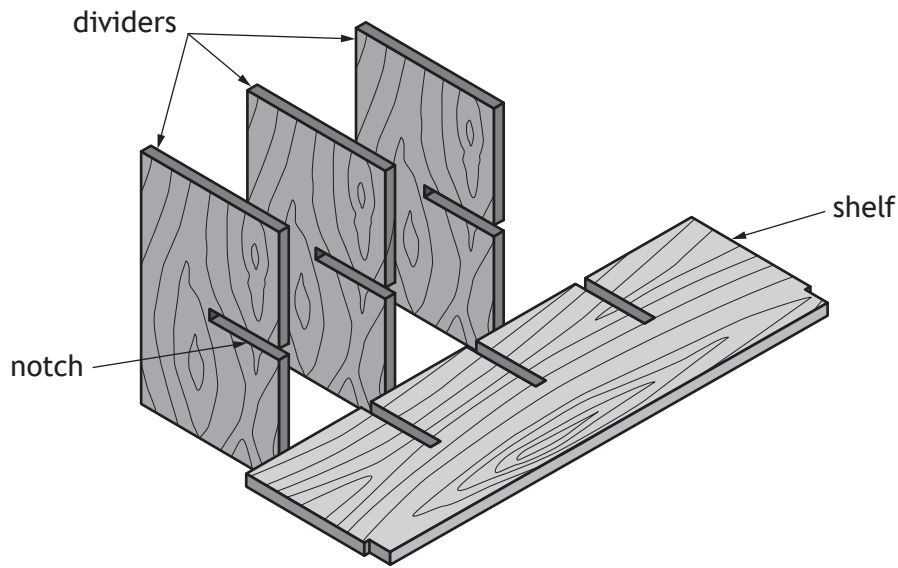


\* X 8 6 2 7 5 0 1 1 1 \*

2. (continued)

MARKS  
DO NOT  
WRITE IN  
THIS  
MARGIN

- (b) The three dividers are joined to the shelf using the halving joint shown below.



The position of the notch in each of the three dividers is marked using a template.

- (i) Explain why using a template is beneficial to this process. 1

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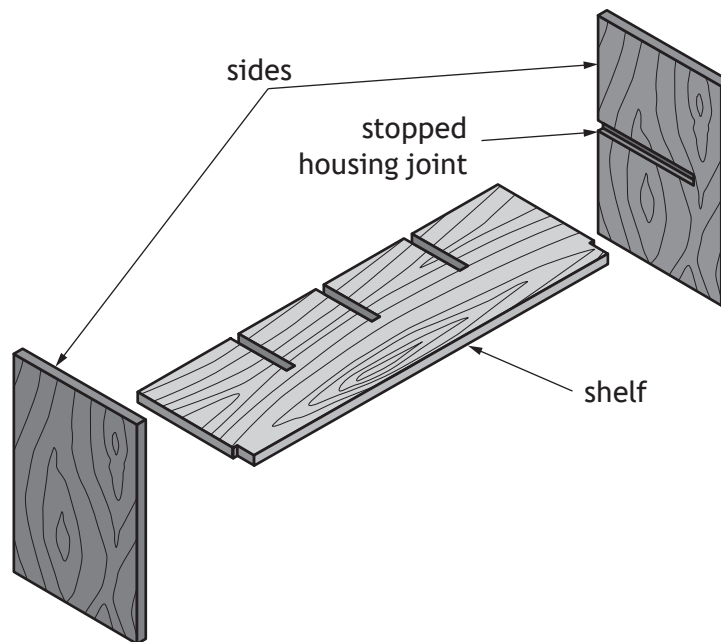
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- (ii) Describe the two stages involved in cutting the notch. 2  
You may use sketches to illustrate your answer.



## 2. (continued)

The shelf is joined to the sides using stopped housing joints.



- (c) Give one reason why a **stopped** housing joint is used rather than a **through** housing joint.

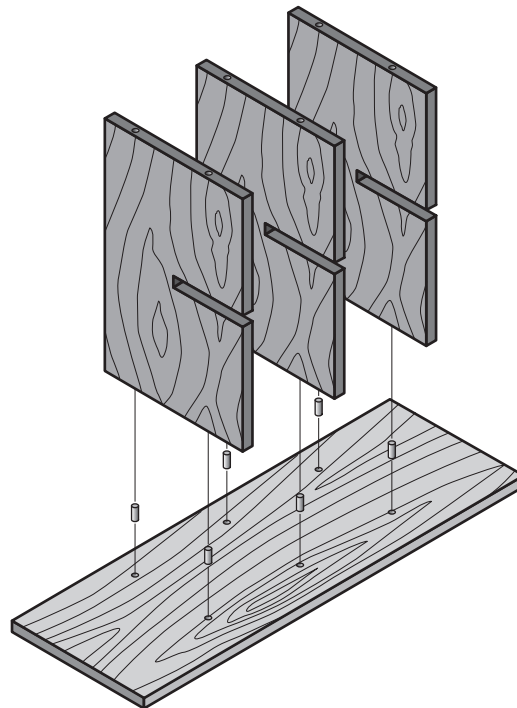
1

[Turn over



2. (continued)

The three dividers are attached to the base using the joint shown below.



(d) Name this joint.

1

\_\_\_\_\_

(e) The top is joined to the sides of the unit using knock down fixings, rather than a manufactured joint.

(i) Describe a benefit to the manufacturer of using knock down fixings.

1

\_\_\_\_\_

\_\_\_\_\_

(ii) Other than the method used to attach dividers to the base, name a suitable knock down fitting for joining the top to the side of the unit.

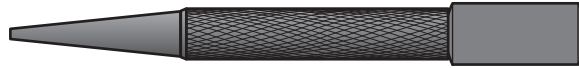
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\_\_\_\_\_



## 2. (continued)

During the assembly of the unit, a backboard is attached using panel pins. While carrying out this process a nail punch (shown below) is used.



- (f) Explain why the nail punch is used during this process.

1

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- (g) Before any finish can be applied to the veneered manufactured boards, they have to be prepared.

- (i) Part of the preparation involves raising the grain.

Describe a method used to raise the grain in wood.

1

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- (ii) Explain why **coarse** abrasive paper would **not** be used on veneered manufactured boards.

1

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- (iii) When rubbing down wood with an abrasive paper, it is essential to **sand with the grain**.

Describe what 'sand with the grain' means.

1

---



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- (iv) Describe what is likely to happen to the wood surface if we don't sand with the grain, but sand across it.

1

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[Turn over



\* X 8 6 2 7 5 0 1 1 5 \*

2. (continued)

MARKS

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MARGIN

(h) All of the manufactured boards are finished with a clear polyurethane varnish before they are assembled.

(i) Give one reason for using a **clear** varnish.

1

\_\_\_\_\_

(ii) Explain why the varnish is applied before assembly.

1

\_\_\_\_\_

Off-cuts are pieces of wood left over from other projects. The four feet of the unit are manufactured from off-cuts.

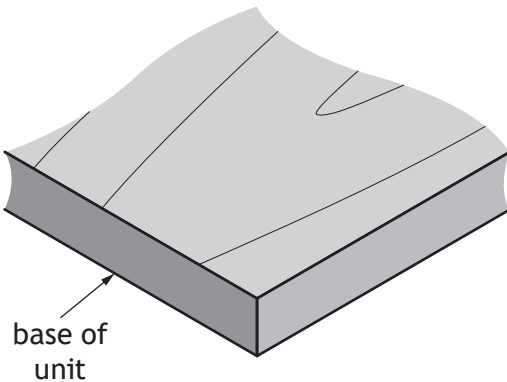
(i) Give two reasons why we are encouraged to use off-cuts.

2

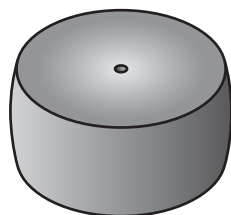
\_\_\_\_\_  
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The feet are attached to the base of the unit using a screw as shown below.

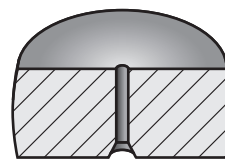
The hole is marked in the centre of the foot. After marking the hole, it is drilled to accommodate a countersink screw.



base of unit



foot



X-section of foot showing hole



screw



\* X 8 6 2 7 5 0 1 1 6 \*



## 2. (continued)

- (j) (i) Describe with reference to the tools used, the two stages involved in producing a hole suitable for a countersink screw.

2

You may use sketches to illustrate your answer.

Stage 1

Stage 2

- (ii) State why the countersink screw is the most suitable for attaching the foot to the unit.

1



\* X 8 6 2 7 5 0 1 1 7 \*

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\* X 8 6 2 7 5 0 1 1 8 \*

3. Health and safety is always a priority in a workshop.

The picture below shows someone working at a woodworking bench.

MARKS

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(a) Describe five health and safety issues that you can find in the picture.

5

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

5 \_\_\_\_\_

When using an orbital sander, one of the main safety concerns is the dust produced.

(b) Name two items of personal protective equipment which you would use to protect from dust, while using the orbital sander.

2

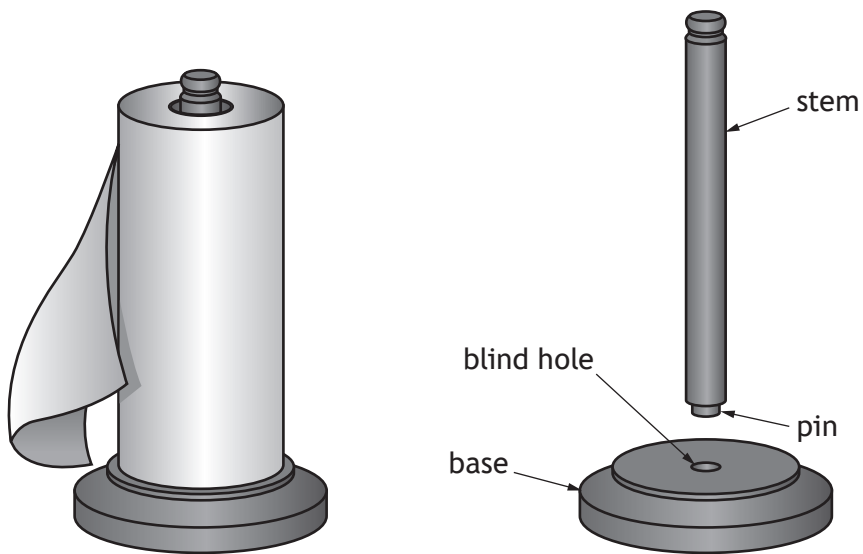
1 \_\_\_\_\_

2 \_\_\_\_\_

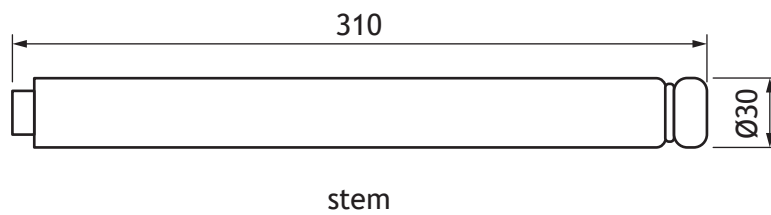


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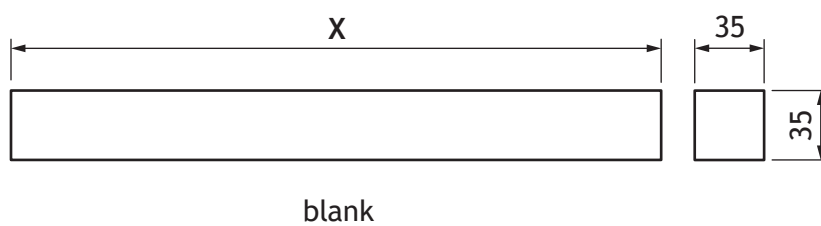
4. A kitchen roll holder is shown below.



The overall dimensions for the stem are shown below. All dimensions are in mm.



(a) The stem is turned from a wooden blank. An allowance of 30 mm is made at **both** sides of the blank for waste wood.



(i) Calculate dimension X from the information given.

1

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## 4. (a) (continued)

- (ii) The blank is turned to  $\text{Ø}30$ .

Name the measuring tool which is used, along with a steel rule, to check this diameter.

1

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- (b) Both parts of the kitchen roll holder are manufactured on a woodturning lathe.

- (i) The **stem** is secured between the headstock and the tailstock of the woodturning lathe.

Name this method of attaching the blank to the woodturning lathe.

1

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- (ii) The **base** is attached only to the headstock of the woodturning lathe.

Name the attachment that is used to secure the base to the headstock.

1

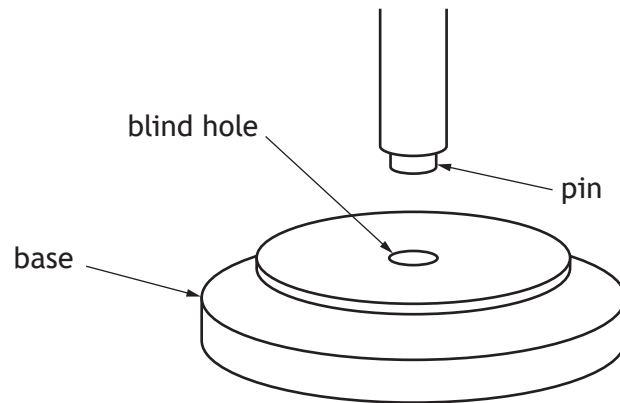
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[Turn over for next question



## 4. (continued)

- (c) The **pin** on the bottom of the stem, is turned to fit the blind hole as shown.



State the two pieces of information from the blind hole that are needed to create the pin.

2

1 \_\_\_\_\_

2 \_\_\_\_\_

- (d) Before switching on the woodturning lathe, a number of checks must be carried out on the machine.

State two of these checks.

2

1 \_\_\_\_\_

2 \_\_\_\_\_

[END OF QUESTION PAPER]



\* X 8 6 2 7 5 0 1 2 2 \*

MARKS

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ADDITIONAL SPACE FOR ANSWERS



\* X 8 6 2 7 5 0 1 2 3 \*

MARKS

DO NOT  
WRITE IN  
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ADDITIONAL SPACE FOR ANSWERS

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Question 2 Viktorija Reuta/Shutterstock.com



\* X 8 6 2 7 5 0 1 2 4 \*