

FOR OFFICIAL USE



National  
Qualifications  
2019

Mark

**X862/75/01**

**Practical Woodworking**

FRIDAY, 3 MAY

2:00 PM – 3:00 PM



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

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.

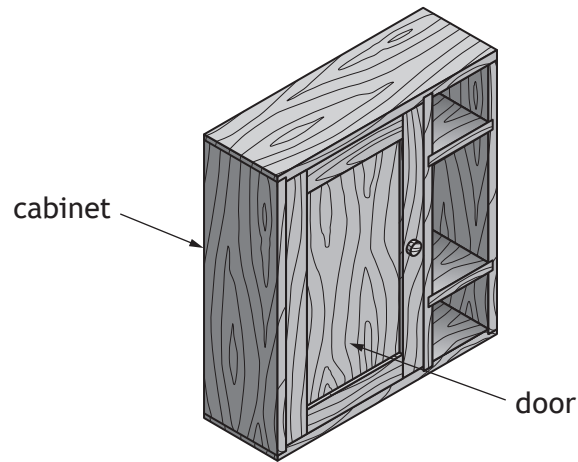
Before leaving the examination room you must give this booklet to the Invigilator; if you do not, you may lose all the marks for this paper.



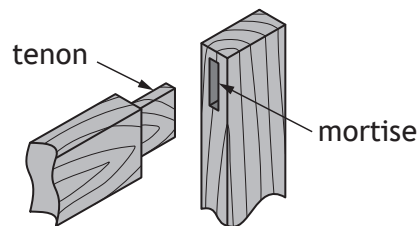
\* X 8 6 2 7 5 0 1 0 1 \*

Total marks — 60  
Attempt ALL questions

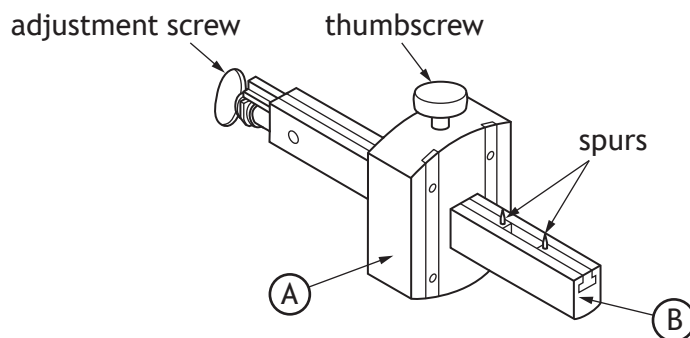
1. A bathroom cabinet is shown.



The door frame of the cabinet was manufactured using the mortise and tenon joint shown.



The mortise gauge shown below was one of the tools used to mark out the joint.



(a) Name the parts labelled A and B in the diagram.

(i) A \_\_\_\_\_ 1

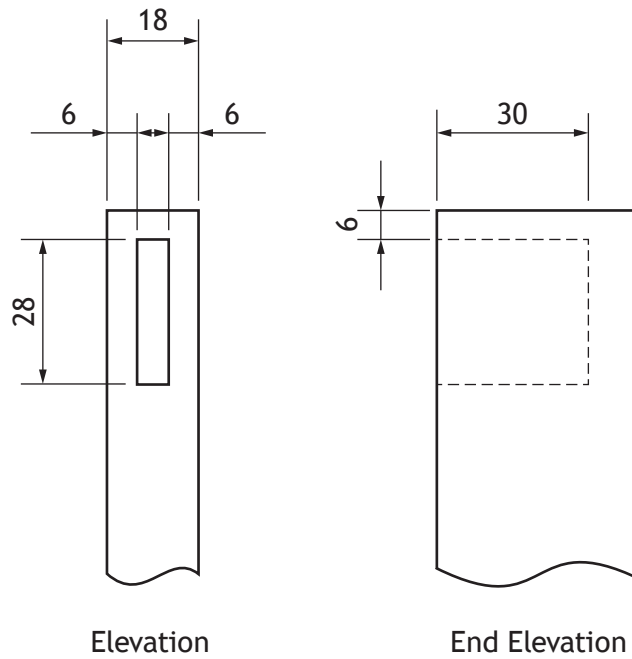
(ii) B \_\_\_\_\_ 1



1. (continued)

The mortise was marked out using the working drawing shown below.

Note: All sizes are in millimetres.



(b) State the distance set between the spurs on the mortise gauge.

1

\_\_\_\_\_ mm

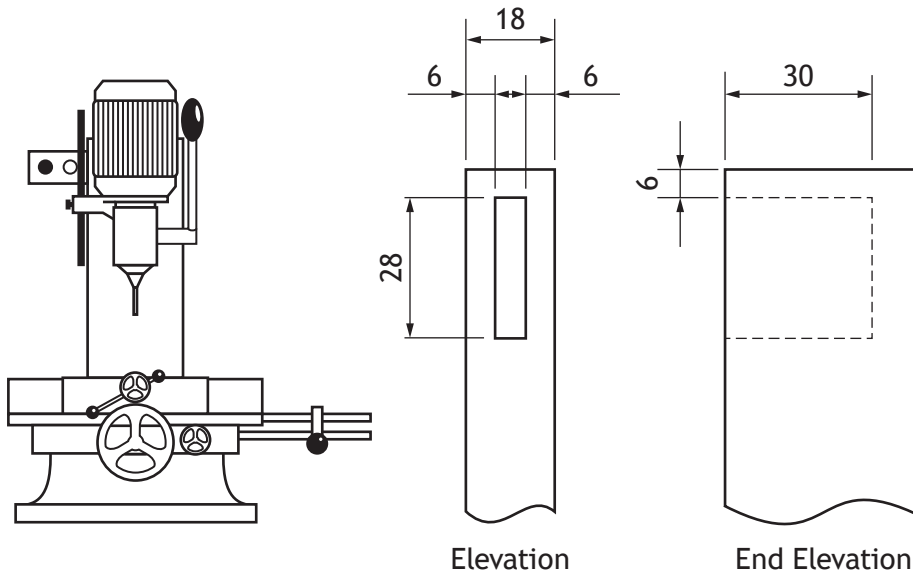
[Turn over



1. (continued)

The mortise machine shown below was used to cut the mortise for the door frame.

Note: All sizes are in millimetres.



- (c) Describe how to set up the mortise machine to cut the mortise to the correct depth. 2

You may use sketches to support your answer. You must give dimensions in your answer.

1. (continued)

- (d) State three health and safety checks that should be carried out on the mortise machine before switching it on.

3

Check 1 \_\_\_\_\_

\_\_\_\_\_

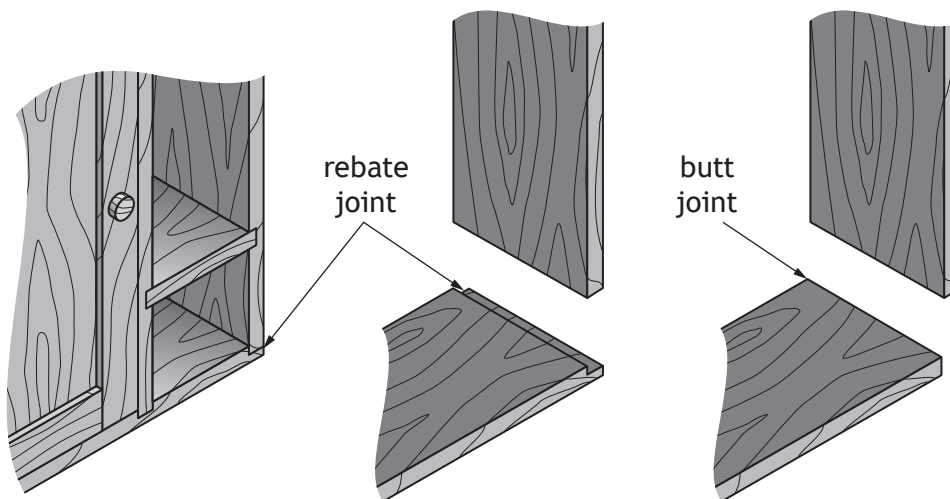
Check 2 \_\_\_\_\_

\_\_\_\_\_

Check 3 \_\_\_\_\_

\_\_\_\_\_

A rebate joint was chosen for the corner of the cabinet instead of a butt joint. Both joints are shown below.



- (e) Explain why a rebate joint was chosen instead of a butt joint.

2

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

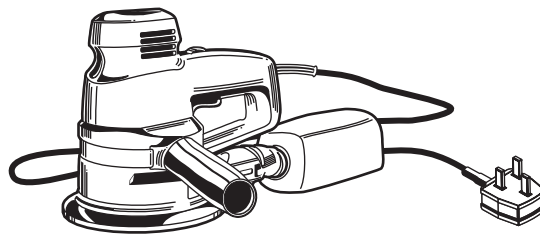
[Turn over



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

## 1. (continued)

The cabinet was sanded with the orbital sander.



- (f) State two health and safety checks that should be carried out on the orbital sander before switching it on.

2

Check 1 \_\_\_\_\_

\_\_\_\_\_

Check 2 \_\_\_\_\_

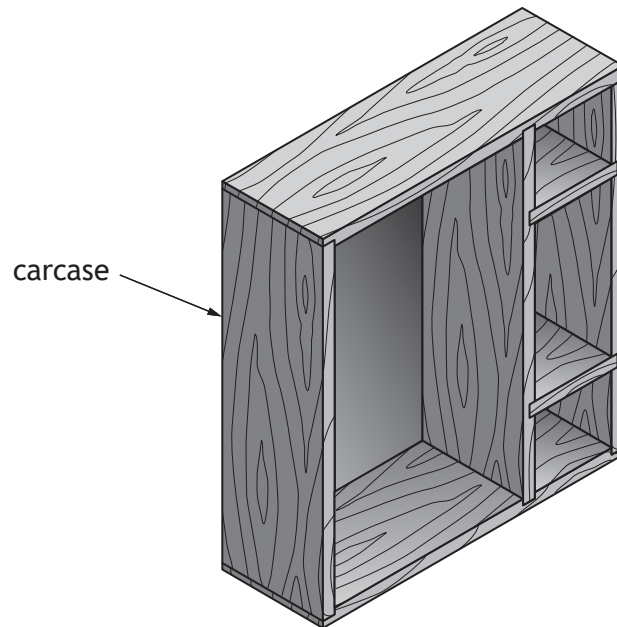
\_\_\_\_\_



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

## 1. (continued)

When the bathroom cabinet was assembled it was essential to ensure the carcass was square.



- (g) Describe how you would **measure** the bathroom cabinet to find out if it was square.

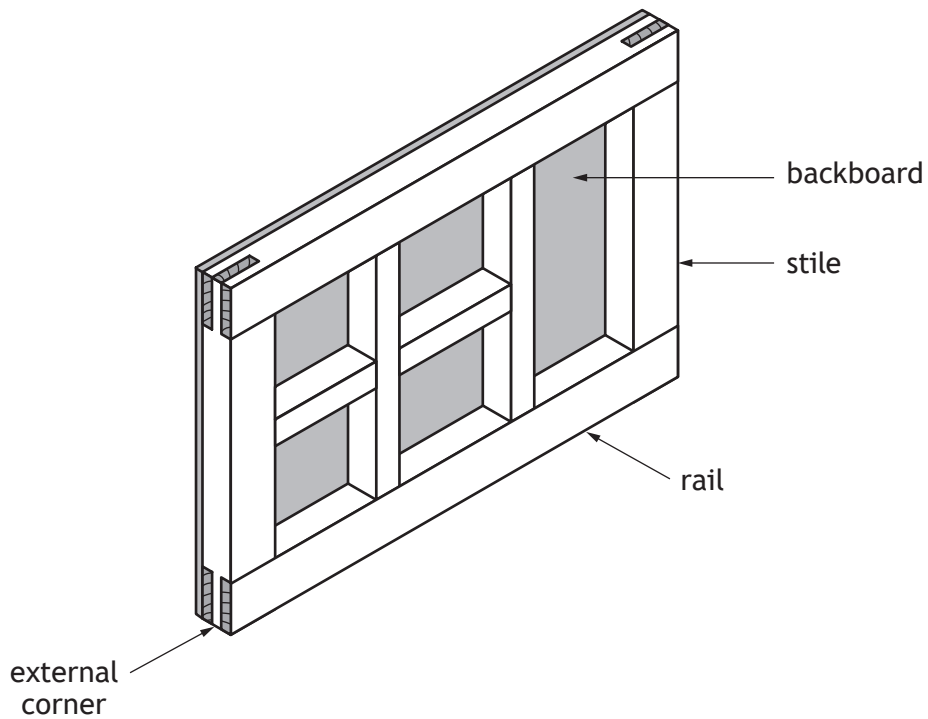
1

You may use sketches to support your answer.



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

2. A wooden picture frame is shown.



A softwood was chosen for the picture frame.

(a) Describe three environmental reasons for this choice.

3

Reason 1 \_\_\_\_\_

\_\_\_\_\_

Reason 2 \_\_\_\_\_

\_\_\_\_\_

Reason 3 \_\_\_\_\_

\_\_\_\_\_

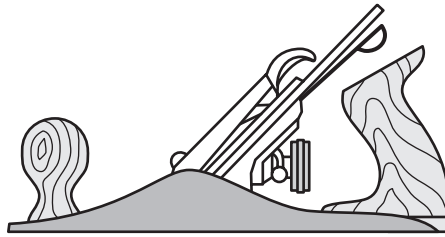


\* X 8 6 2 7 5 0 1 0 8 \*



2. (continued)

The smoothing plane shown was used to plane the rails to the correct width.



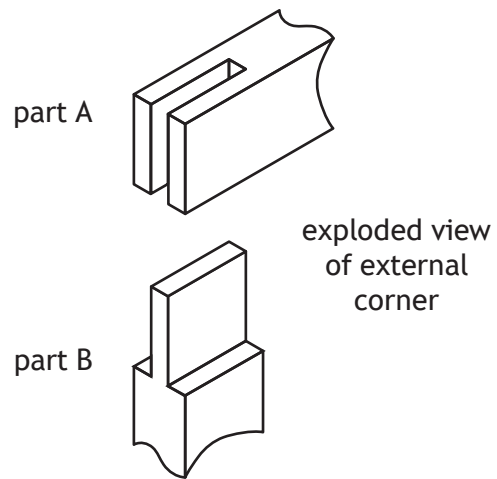
- (b) Describe how to set up the smoothing plane before use.  
You may use sketches to support your answer.

2

[Turn over

## 2. (continued)

The joint used to construct the four external corners of the picture frame is shown.



(c) Name this joint.

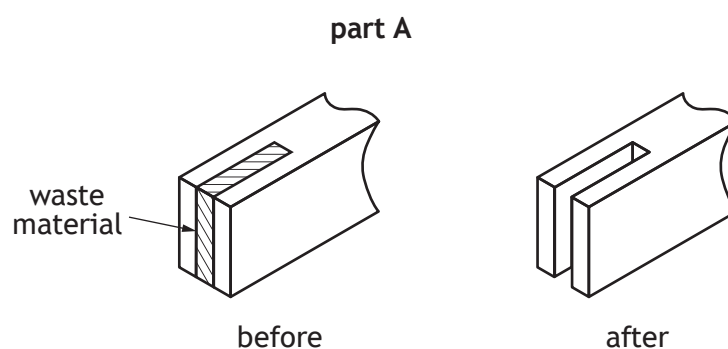
1

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## 2. (continued)

Part A of the joint used to construct the external corners of the picture frame is shown.



- (d) Describe **two** stages in removing the waste material from **part A** using hand tools.

2

You may use sketches to support your answer.

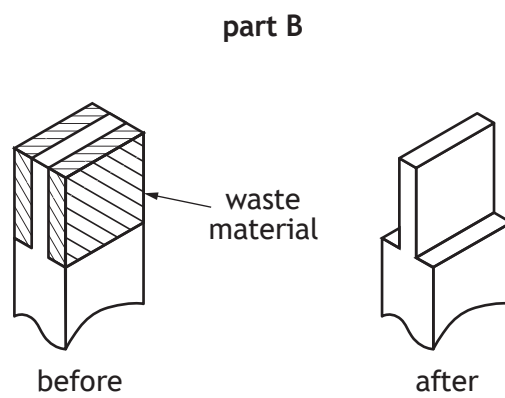
[Turn over



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

## 2. (continued)

Part B of the joint used to construct the external corners of the picture frame is shown.



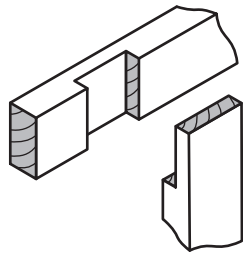
- (e) State which **hand tool** was used to remove the waste material from part B. 1

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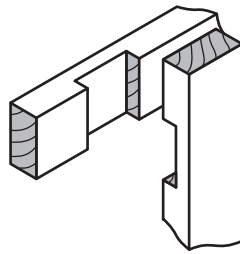


2. (continued)

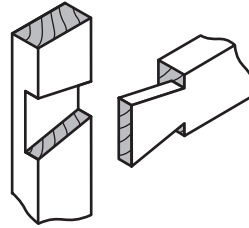
The following joints were considered for use in the construction of the picture frame.



joint A



joint B



joint C

(f) Name the joints shown above.

3

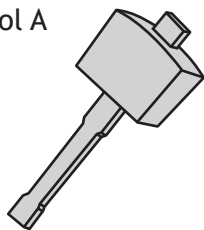
Joint A \_\_\_\_\_

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

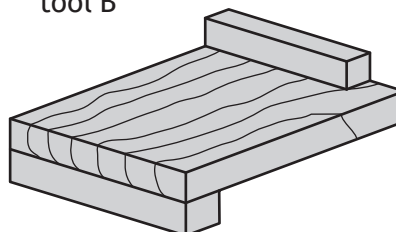
Joint C \_\_\_\_\_

The following tools were used in the manufacture of the picture frame.

tool A



tool B



(g) Name these tools.

2

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

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

[Turn over



2. (continued)

- (h) Explain the purpose of **stopping** the material before sanding and applying a surface finish.

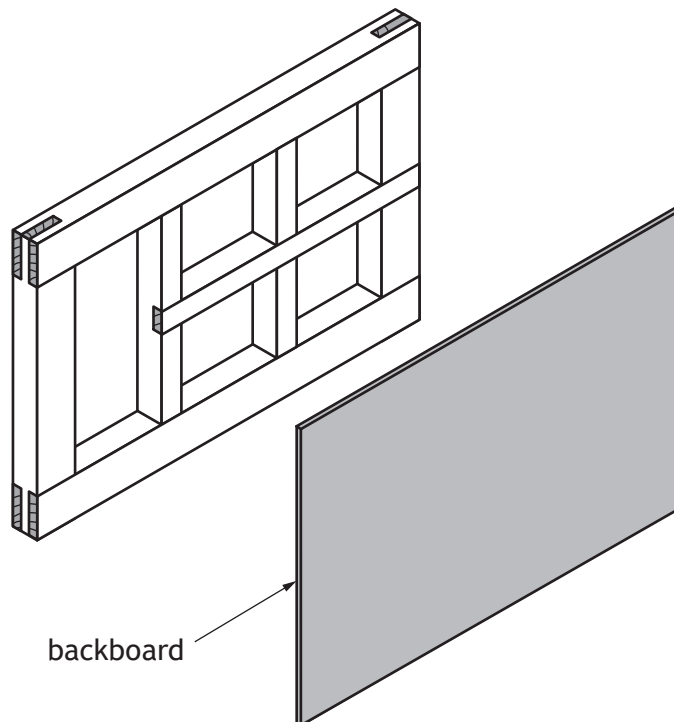
1

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A manufactured board was used for the backboard of the picture frame.



- (i) State two different manufactured boards that are suitable for the backboard, **other than plywood**.

2

1 \_\_\_\_\_

2 \_\_\_\_\_

[Turn over for next question

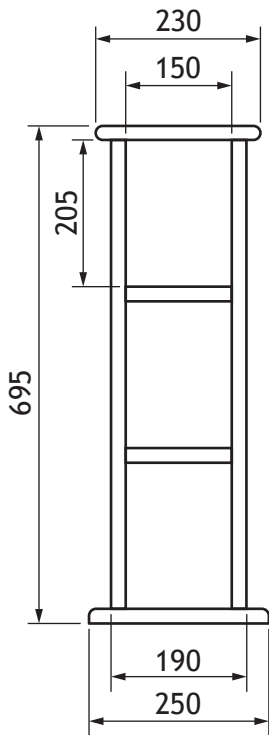
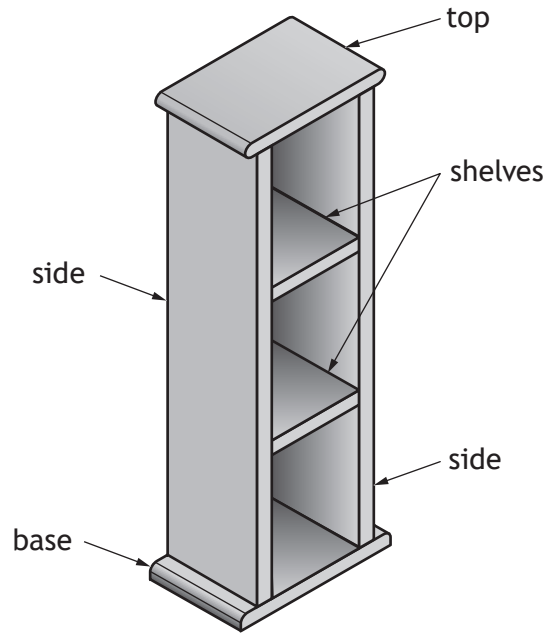
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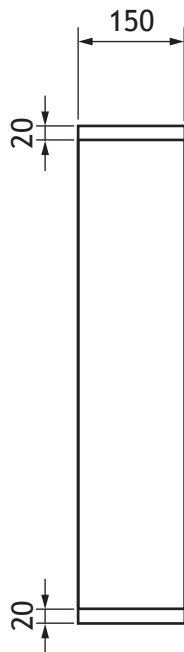
\* X 8 6 2 7 5 0 1 1 5 \*

3. A DVD storage unit and its working drawings are shown below.

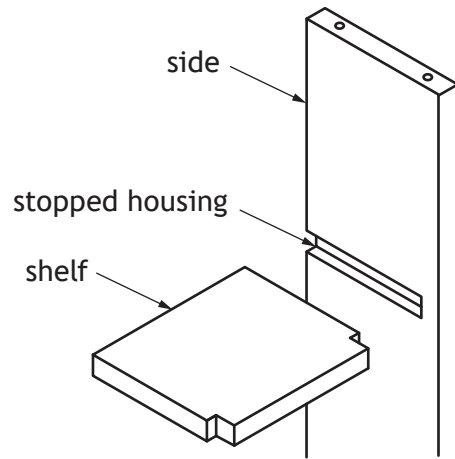
Note: All sizes are in millimetres. Hidden detail omitted for clarity.



Elevation



End Elevation



stopped housing for  
shelves cut to half depth



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



3. (continued)

- (a) Complete the cutting list below, using the information in the working drawings shown opposite.

4

Cutting list					
Part	Quantity	Material	Length	Breadth	Thickness
Top	1	red pine	230	150	20
Sides	2	red pine		150	20
Shelves		red pine		150	20
Base	1	red pine		150	20

The stopped housing shown opposite was cut to half the depth of the sides.

- (b) Describe how the marking gauge was set to half depth without the use of a rule.

2

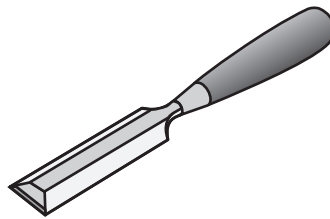
You may use sketches to support your answer.



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

## 3. (continued)

The stopped housing was cut using a bevel edged chisel.

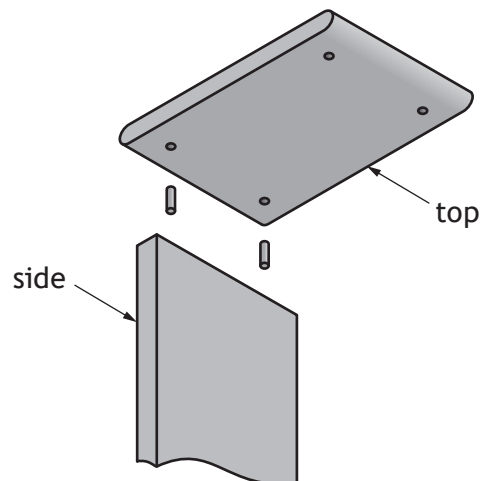


- (c) State one health and safety check that was made **on the tool** before chiselling out the waste material.

1

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The joint shown was used to join the top to the sides of the DVD storage unit.



- (d) Name this joint.

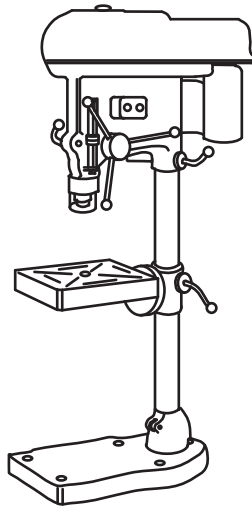
1

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3. (continued)

(e) The pillar drill shown was used to drill the holes in the top and sides.



The holes were drilled using the drill bit shown below.



(i) State the name of this type of drill bit. 1

\_\_\_\_\_

(ii) Describe two methods of ensuring the holes are drilled to a depth of 10 mm using the pillar drill. 2

Method 1 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Method 2 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[Turn over



## 3. (e) (continued)

(iii) In the workshop, personal health and safety is a priority.

State three **personal** health and safety checks that should be carried out before the pillar drill is switched on.

3

Check 1 \_\_\_\_\_

\_\_\_\_\_

Check 2 \_\_\_\_\_

\_\_\_\_\_

Check 3 \_\_\_\_\_

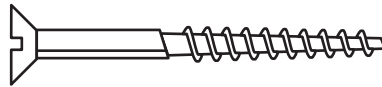
\_\_\_\_\_



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

3. (continued)

The base was attached to the sides using the type of screw shown.



(f) Name this type of screw.

1

\_\_\_\_\_

(g) Explain why this type of screw was used instead of a round head screw.

1

\_\_\_\_\_  
\_\_\_\_\_

The DVD storage unit was dry cramped before final assembly.

(h) Explain what is meant by the term 'dry cramping'.

1

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(i) Name a suitable wood glue that would be used when assembling the DVD storage unit.

1

\_\_\_\_\_

[Turn over



4. A wooden highchair made from solid wood is shown.  
A manufactured board was used for the removable table.



Manufactured boards are constructed in different ways.

- (a) Two manufactured boards considered for the removable table were plywood and veneered chipboard.

- (i) Describe how plywood is constructed.

1

You may use sketches to support your answer.

A large empty rectangular box for drawing or sketching.

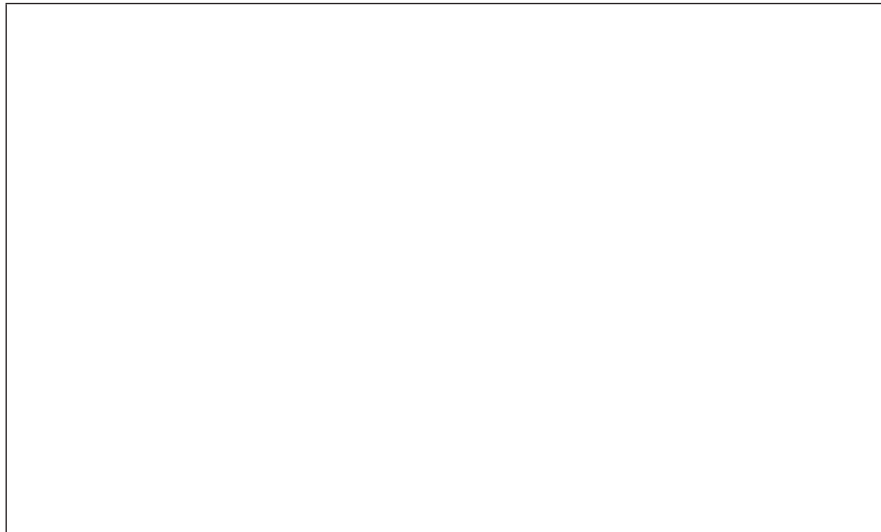


## 4. (a) (continued)

(ii) Describe how chipboard is constructed.

1

You may use sketches to support your answer.



Solid wood was also considered for the removable table before plywood was chosen.

(b) State two reasons why plywood was the preferred choice over solid wood.

2

Reason 1 \_\_\_\_\_

\_\_\_\_\_

Reason 2 \_\_\_\_\_

\_\_\_\_\_

[Turn over

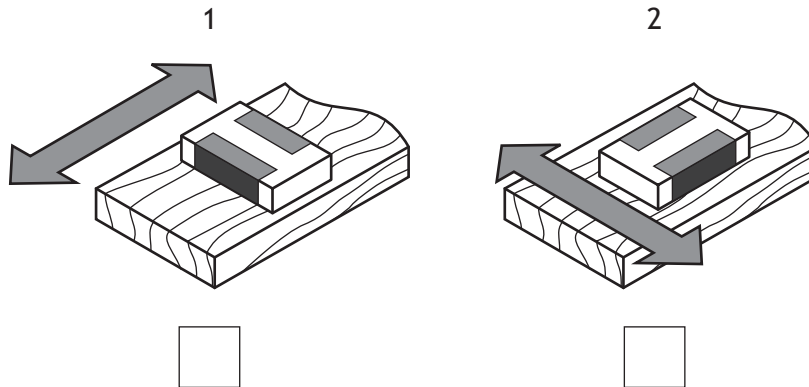


\* X 8 6 2 7 5 0 1 2 3 \*

4. (continued)

(c) Abrasive paper was used to prepare the surface of the solid wood prior to applying a finish to the highchair.

(i) Tick the box below that shows the correct direction of sanding. 1



A damp cloth was used to wet the solid wood during the surface preparation process.

(ii) Explain why a damp cloth was applied to the surface of the solid wood. 1

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(d) Three grades of abrasive paper were used in the surface preparation process. They were 80, 120 and 240 grit.

(i) State which grade of abrasive paper was used last when preparing the surface. 1

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(ii) Explain why this grade of abrasive paper was selected. 1

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4. (continued)

(e) A range of finishes were considered for the wooden highchair, although some of them were not suitable.

(i) State two suitable wood finishes that could be used for the wooden highchair. 2

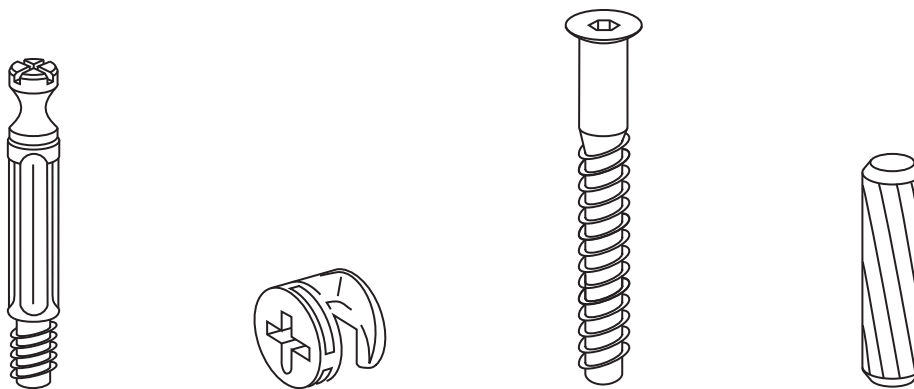
1 \_\_\_\_\_

2 \_\_\_\_\_

(ii) Explain why some finishes are not suitable for the wooden highchair. 1

\_\_\_\_\_  
\_\_\_\_\_

The fixings shown were used in the manufacture of the highchair.



(f) State the collective name for these fixings. 1

\_\_\_\_\_

[END OF QUESTION PAPER]



MARKS

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ADDITIONAL SPACE FOR ANSWERS



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

MARKS

DO NOT  
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\* X 8 6 2 7 5 0 1 2 8 \*