



**Turnbull High School  
Technical Department**

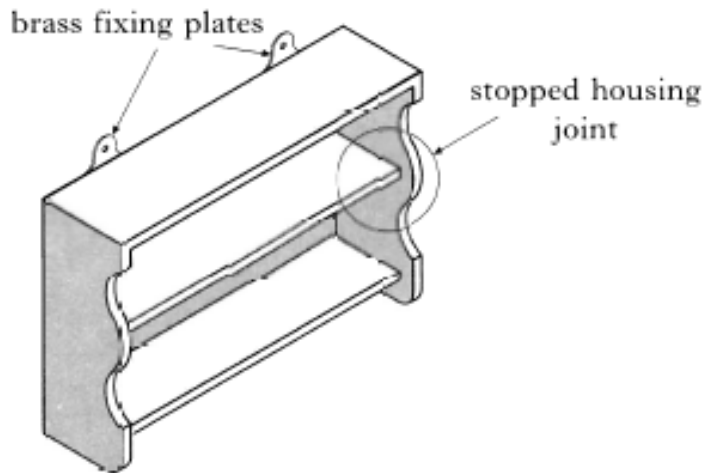
# **National 5 Practical Woodwork Homework Booklet 2**

**Name:**

**Class:**

**Teacher:**

1. Shown below is a wall cabinet which will hold eight mugs.



- (a) (i) The number of mugs to be held in the cabinet was found at the investigation stage.  
Write down **one** other piece of information about the mugs which will help in deciding the size of the cabinet.

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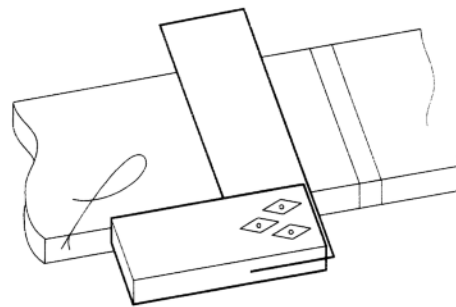
1

- (ii) Which dimension on the wall cabinet will this enable you to find?

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1

- (b) (i) Which hand tool would be used when marking lines across the face of the timber with a pencil?




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1

- (ii) If the thickness of the timber was 12 mm, how deep should the stopped housing be?

\_\_\_\_\_ mm

1

- (iii) Name the hand tool that will mark a parallel line for the depth of the housing.

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1

1. (continued)

- (c) Before assembly, all the inside surfaces should be cleaned to remove any marks. Give a reason for this.

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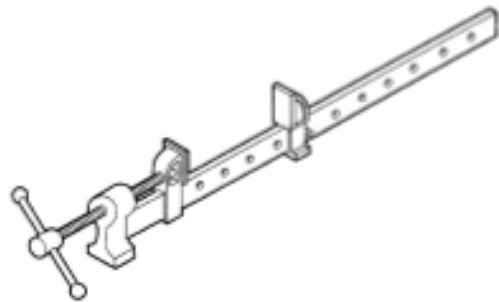
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1

- (d) What type of clamp is shown below?

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1

- (e) Explain the term 'dry clamping'.

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1

- (f) The cabinet is checked for 'squareness' just after it has been glued and cramped. Describe two methods of checking for 'squareness'.

Method 1 

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1

Method 2 

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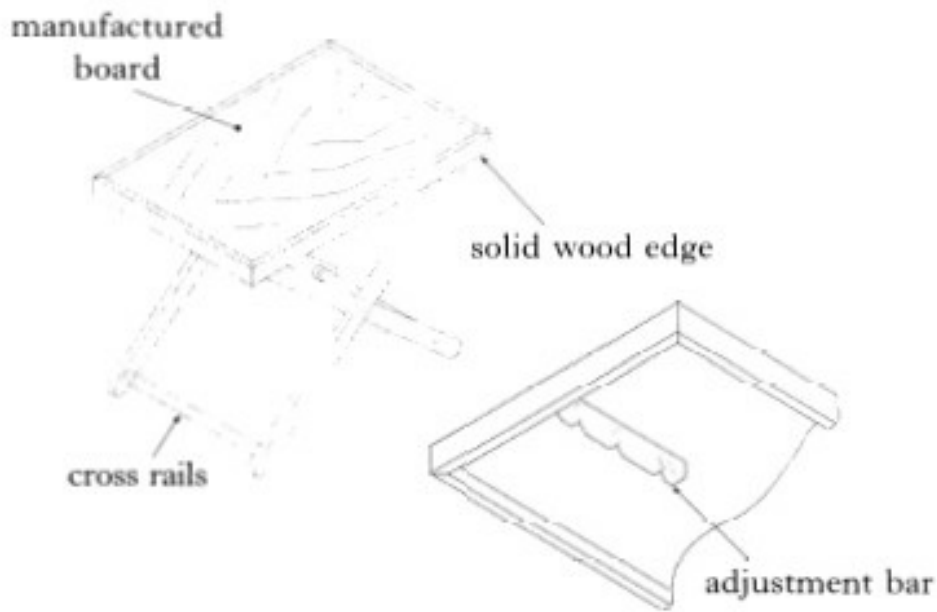
1

- (g) Name a suitable man made board for the thin back of the cabinet.

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1

2. A table which can be adjusted in height is shown below.



(a) The table top is made from a manufactured board with a veneered surface and a solid wood edge.

(i) Name a suitable manufactured board. \_\_\_\_\_

1

(ii) Give a brief description of this board. Use a sketch to illustrate your answer.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1

(iii) Give **two** advantages a manufactured board has over a traditional solid wood top.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

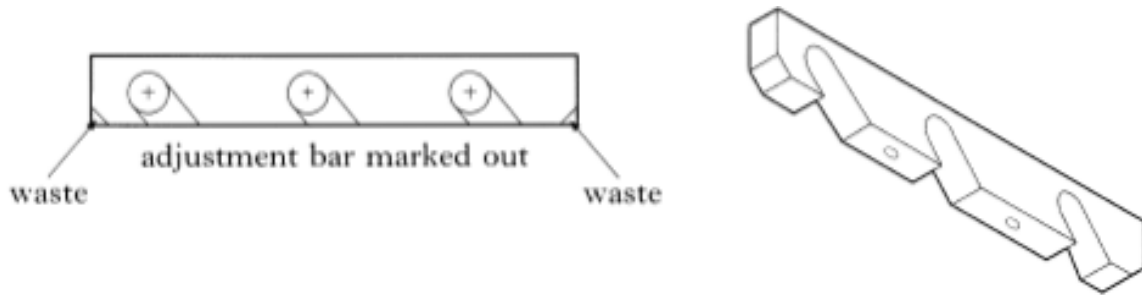
\_\_\_\_\_

1

1

2 (continued)

(b) The adjustment bar which sits on the underside of the table is shown below.



(i) Name the tool which can be used when drawing the sloping lines with a pencil.

\_\_\_\_\_

1

(ii) Describe how you could mark out the adjustment bar.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

2

(iii) Name the hand tool which will cut most of the waste from the two corners.

\_\_\_\_\_

1

(c) The adjustment bar is held in position by gluing and screwing.

(i) Name a glue that is supplied ready to use and any excess glue can be removed easily, to prevent staining the wood.

\_\_\_\_\_

1

(ii) The screws are countersunk into the wood. Explain what is meant by countersinking. (Use sketches to explain your answer).

\_\_\_\_\_

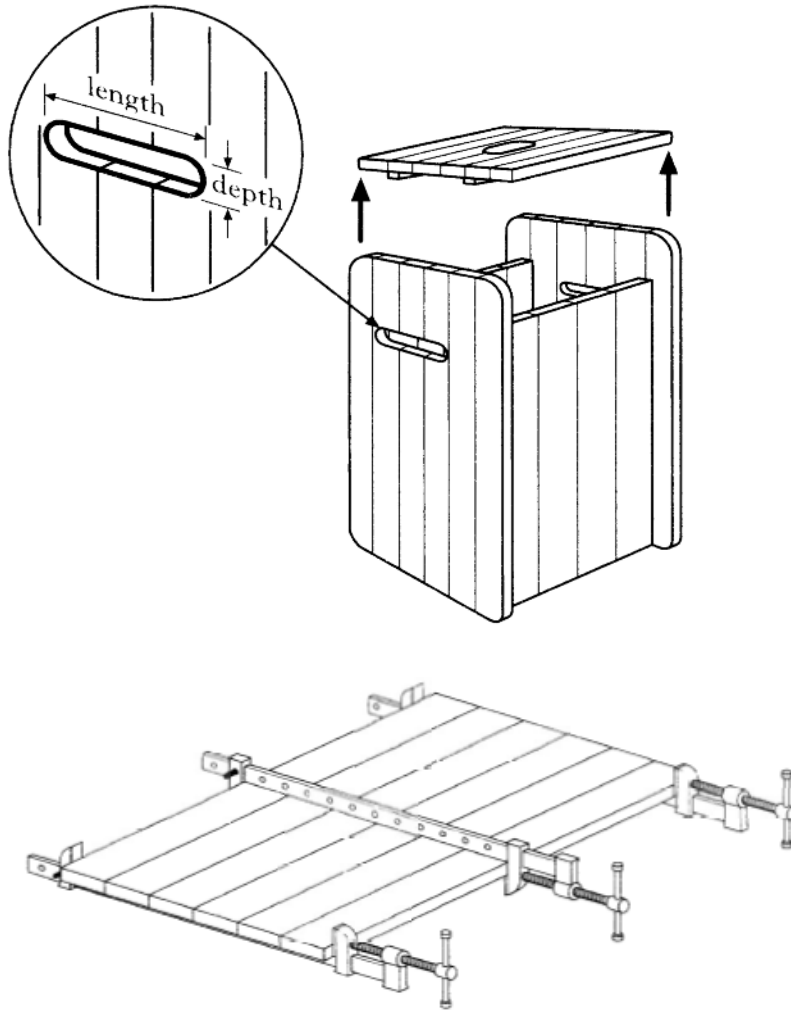
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\_\_\_\_\_

\_\_\_\_\_

2

1. A laundry box made from *red pine* is shown.



(a) The sides are made by gluing strips of red pine and holding them together as shown

(i) Name the type of joint shown \_\_\_\_\_ 1

(ii) Give the name of the holding device \_\_\_\_\_ 1

(iii) Explain why one holding device is placed on top \_\_\_\_\_ 1

\_\_\_\_\_

(iv) When the holding device is tightened it could damage the edges. Explain how this could be avoided. \_\_\_\_\_ 1

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(c) The laundry box could have been made from manufactured board.

(i) Name a suitable board \_\_\_\_\_

1

(ii) Describe this board (You may use a sketch).

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1

(iii) Using manufactured board for the laundry box may save preparation time and may cost less. Give **ONE** other advantage of using manufactured board.

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1

(d) A portable power tool could be used to clean up the wide surface of the red pine board. Give the name of a suitable power tool.

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1

(e) Two slots were cut into the SIDES of the box.

(i) Suggest the purpose of these slots.

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1

(ii) Which factors influence the size of the

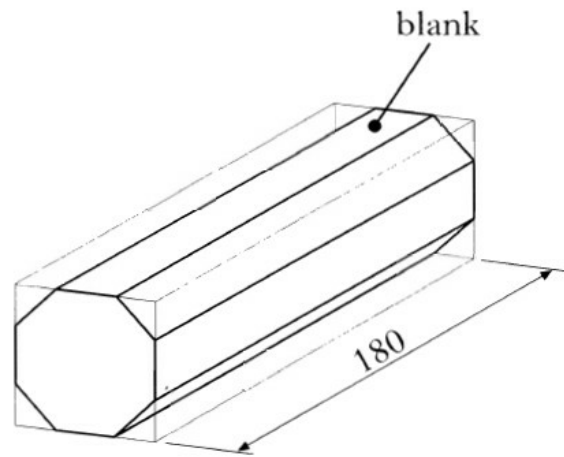
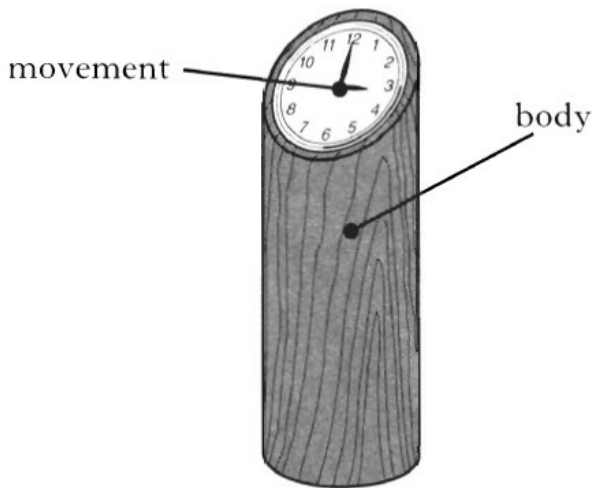
Length of the slot \_\_\_\_\_

Depth of the slot \_\_\_\_\_

1

1

2. A clock is shown.



(a) The body is made from a close grained hardwood.

Suggest a suitable timber.

\_\_\_\_\_

(b) If the finished size of the clock is to be 120 x Ø50mm, suggest two reasons why the length of the block is 180mm.

(i) \_\_\_\_\_  
\_\_\_\_\_

(ii) \_\_\_\_\_  
\_\_\_\_\_

(c) The ends of the blank should be prepared before the corners are removed and prior to fitting on the lathe. Describe, in sequence, how the ends should be prepared so that they will fit on the lathe between centres. (sketches may be used)

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

1

2

5



(d) Name a hand tool that can be used to remove the corners from the blank prior to turning.

\_\_\_\_\_

1

(e) The blank is held between the two centres shown.

(i) Write the correct names under each diagram.



Name \_\_\_\_\_ Name \_\_\_\_\_

2

(ii) Which centre must be held in the headstock?

\_\_\_\_\_

1

(f) (i) Write down one safety check that should be done on the tailstock.

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

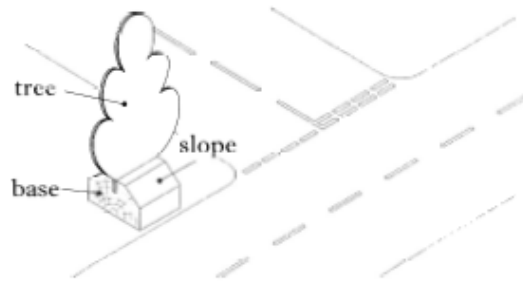
1

(ii) If one end of the wooden blank starts to overheat, what can you do to reduce the risk of this happening again?

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

1

1. A toy tree, from a set of twelve used by young children, is shown below.



(a) Name a thin, multi-layered manufactured board which would be suitable for the toy trees.

\_\_\_\_\_

1

(b) (i) Name a machine that can be used to cut round the shape of the trees.

\_\_\_\_\_

1

(ii) Give a safety precaution that should be observed when using this machine.

\_\_\_\_\_

1

(c) In making the set, all the bases are marked out at the same time as shown:



(i) State the name of the marking out tool that is used to accurately mark the lines round the four sides of the timber.

\_\_\_\_\_

1

(ii) Name a hand tool that could be used to cut the slope on the edge.

\_\_\_\_\_

1

(iii) Name a hand saw that could be used to separate the bases.

\_\_\_\_\_

1

(iv) Name a machine that can be used to smooth off the ends of the bases after they have been cut.

\_\_\_\_\_

1

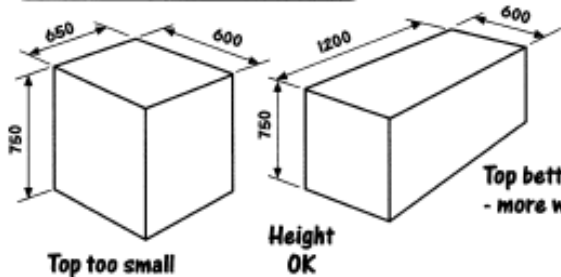
(e) Name a suitable coloured finish for the trees and the base.

\_\_\_\_\_

1

2. Initial ideas for a collapsible drawing table are shown below:

**POSSIBLE OVERALL SIZES**



Top too small

Height OK

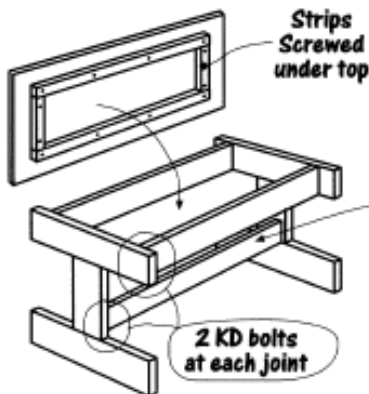
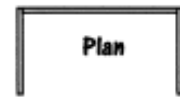
Top better - more working area

Top hinged to back frame



NO

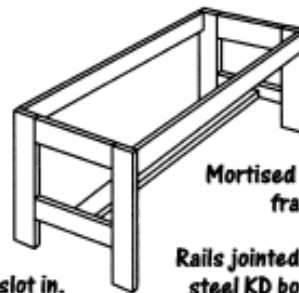
Three frames hinged together



2 knock down bolts for each joint.

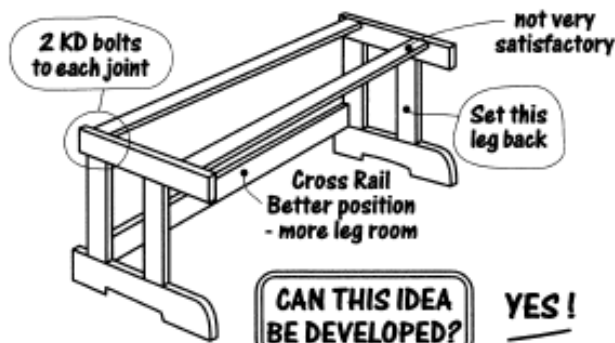
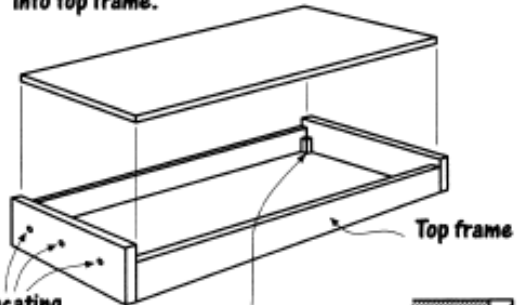


TOO PLAIN

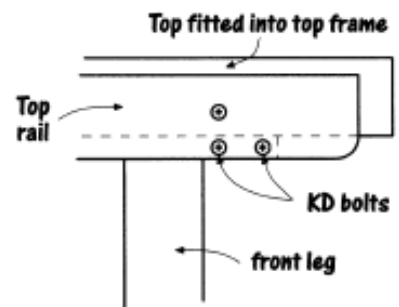
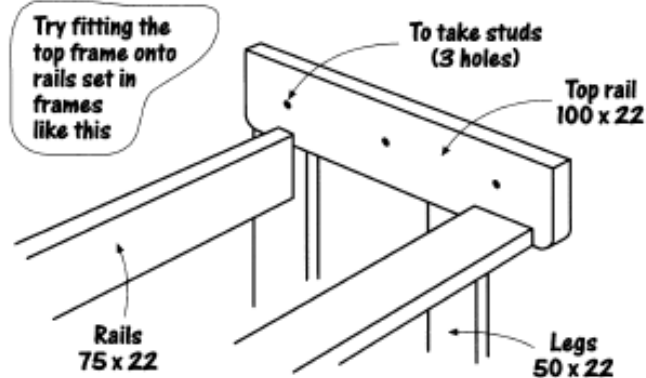
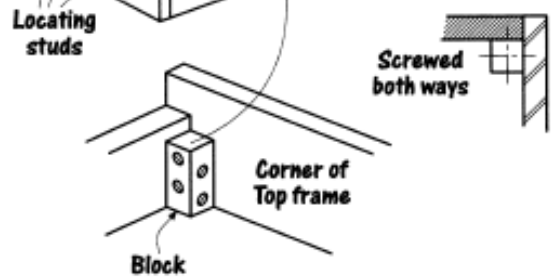


Rails jointed with steel KD bolts.

Veneered chipboard worktop dropped into top frame.



**CAN THIS IDEA BE DEVELOPED? YES!**



(a) From the information given on the previous page, answer the following questions:

(i) Identify the overall dimensions that would give more surface area for the worktop.

Length \_\_\_\_\_ x Breadth \_\_\_\_\_

2

(ii) Identify a suitable material for the worktop.

\_\_\_\_\_

1

(iii) Identify a suitable means of joining the corners of the top frame.

\_\_\_\_\_

1

(iv) What is the thickness of the material for the frame?

\_\_\_\_\_

1

(v) How many knock-down fittings would be required for each joint?

\_\_\_\_\_

1

(b) Suggest another manufactured board that would be suitable for the worktop.

\_\_\_\_\_

1

(c) Sketch another joint that could be used for the corners of the top frame.

*Sketch in this box*



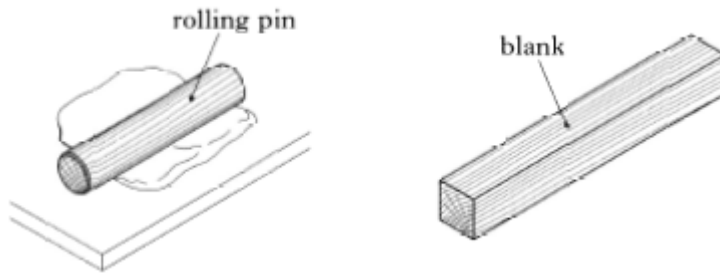
1

(d) What tool will be required to assemble the knock-down fittings shown?

\_\_\_\_\_

1

3. A wooden rolling pin is to be made on a wood lathe.



(a) Name a close-grained hardwood suitable for turning the rolling pin.

\_\_\_\_\_

1

(b) Complete the sequence of operations required to prepare the blank for turning before fitting it onto the lathe. (Sketches may be used to support your answer.)

(i) Mark the diagonals on both ends.

(ii) \_\_\_\_\_

\_\_\_\_\_

(iii) \_\_\_\_\_

\_\_\_\_\_

(iv) \_\_\_\_\_

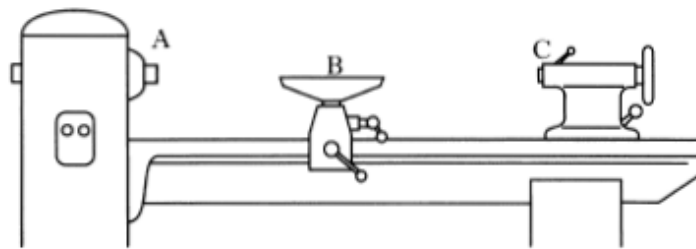
\_\_\_\_\_

(v) \_\_\_\_\_

\_\_\_\_\_

4

(c) With reference to the sketch below:



(i) Where would the fork centre be fitted? (A, B or C) \_\_\_\_\_

1

(ii) Where would the revolving centre be fitted? (A, B or C) \_\_\_\_\_

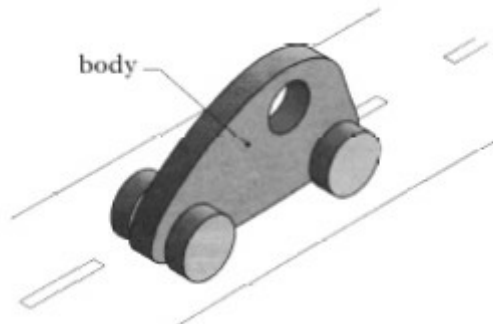
1

(d) Once the lathe has been set up, but before it is switched on, it is good practice to turn the blank by hand. Explain why this is done.

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

1

1. A toy car made from beech was made by an enterprise group within a school.



(a) The large hole in the body was drilled using the bit shown below:



(i) Name the bit shown.

\_\_\_\_\_

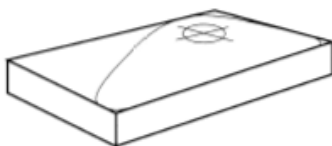
1

(ii) Describe how the beech could be prevented from splitting when boring the large hole.

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

1

(b) The body was cut out using a coping saw. Sketch a coping saw.



1

(c) Name the tool used to check the diameter of the wheels.

\_\_\_\_\_

1

(d) The body has to be prepared for a clear finish. Describe any **two** stages in the preparation to ensure a good finish.

1. \_\_\_\_\_

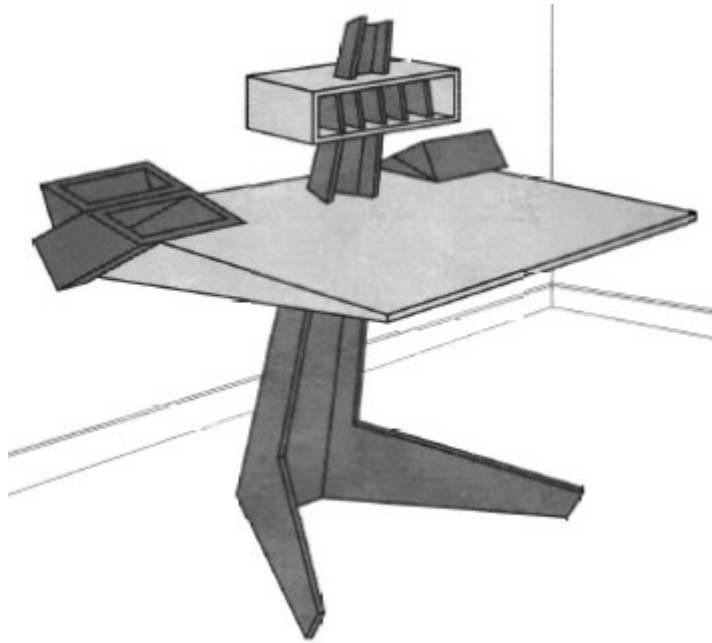
\_\_\_\_\_

2

2. \_\_\_\_\_

\_\_\_\_\_

2. A desk design is shown below.



(a) (i) Name a manufactured board which could be used to make the desk.

\_\_\_\_\_

1

(ii) State a reason why manufactured board was selected to make the desk.

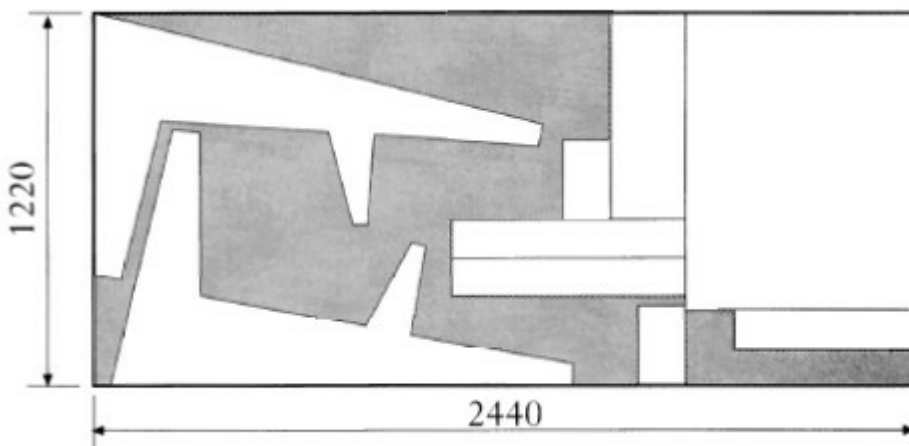
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\_\_\_\_\_

1

The marked out manufactured board is shown below.



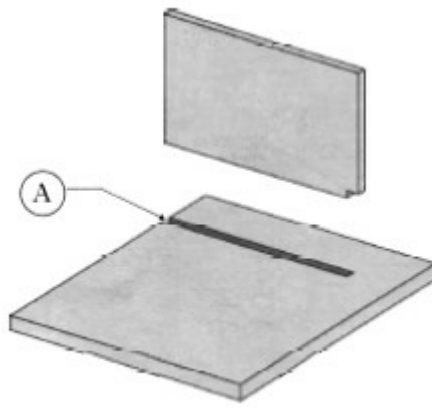
(iii) Two saws were used to cut the shapes from the manufactured board. Name a suitable:

Portable machine saw \_\_\_\_\_

Handsaw \_\_\_\_\_

2

(b) An exploded view of a joint used in the desk construction is shown below.



(i) Name this type of joint.

\_\_\_\_\_

1

(ii) Complete the sequence of operations for making A.

1. Mark out

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. Level off the bottom of the joint accurately.

3

(iii) The tool shown was used for the last operation.

Name this tool: \_\_\_\_\_



1

(c) A coloured finish has to be applied to the desk.

(i) Name **two** suitable finishes that could be applied.

1. \_\_\_\_\_

2. \_\_\_\_\_

2

(ii) Name **one method** of applying the first finish that you have named

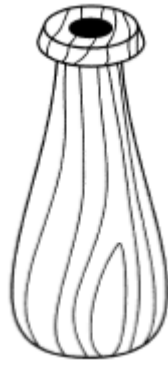
\_\_\_\_\_

\_\_\_\_\_

1



3. The wooden vase shown was made on a machine.



(a) State the name of this machine.

\_\_\_\_\_

(b) List **four** steps required to prepare the wooden blank **before** fitting it between centres. Sketches maybe used to illustrate your answer.

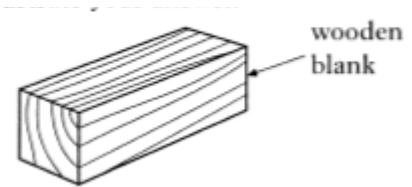
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1

4

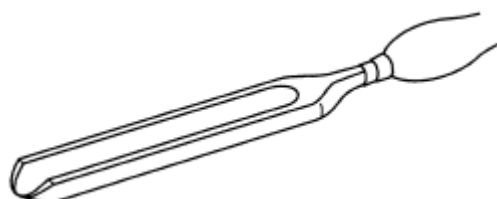
(c) Once the wooden blank has been fitted between centres, several checks should be made to the machine before switching it on. List any **two** of these checks.

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

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

2

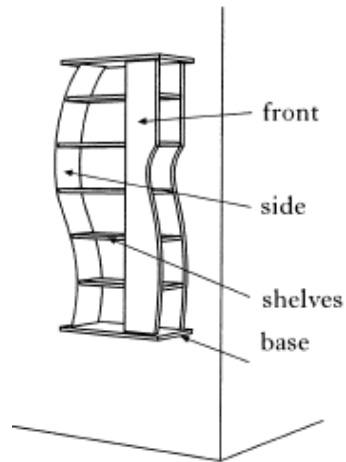
(d) The wooden blank was reduced to a cylinder using this tool.



(i) State the name of this tool. \_\_\_\_\_

1

1. The sketch below shows a shelving unit to display ornaments.



(a) The front is made from MDF.

(i) State the name of a **machine tool** that could be used to cut the curve.

\_\_\_\_\_

1

(ii) State the name of a **hand tool** that could be used to cut the curve.

\_\_\_\_\_

1

(b) A **coloured** finish has to be applied.

State the names of **two** suitable finishes.

1. \_\_\_\_\_

2. \_\_\_\_\_

2

(c) The shelves are made from beech.

(i) State the name of another hardwood which could be used.

\_\_\_\_\_

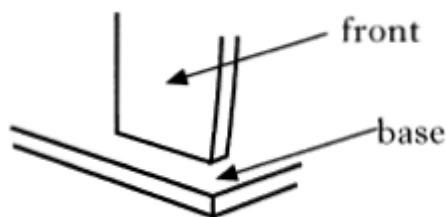
1

(ii) State the name of a surface finish which will allow the grain of the wood to be seen.

\_\_\_\_\_

1

(d) The sketch shows part of the front and the base.

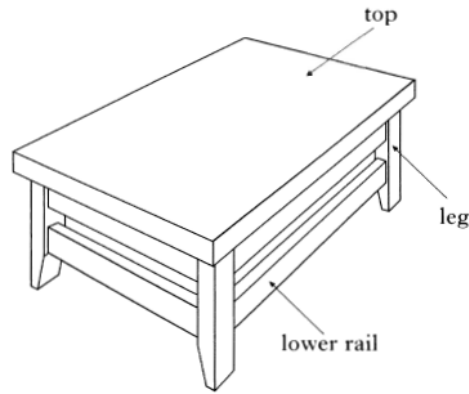


State the name of a suitable joint which would help join the front to the base.

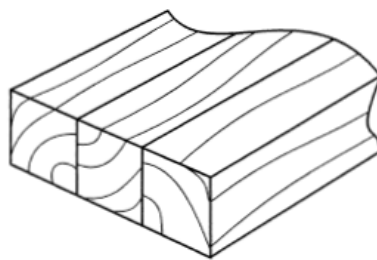
\_\_\_\_\_

1

2. The table shown below is made from pine.



(a) The top is made by gluing strips of pine together as shown:



(i) Explain why it may be necessary to make the top this way.

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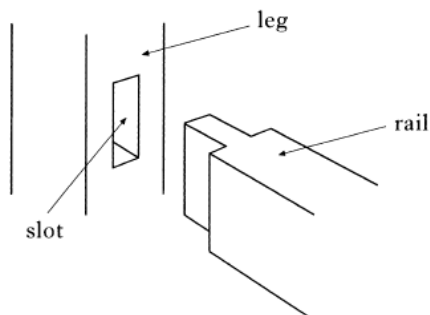
1

(ii) State the name of the device used to hold the strips of pine together while gluing.

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1

(b) The legs and lower rail were joined together as shown:

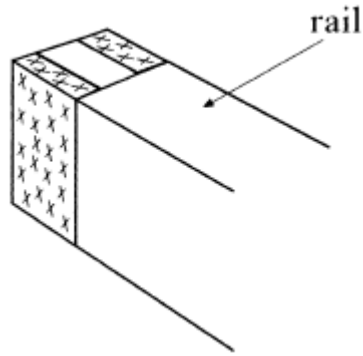


State the name of the joint.

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1

(c) The rails were marked out as shown below.



(i) State the names of **two** tools which could be used to mark out this joint *other than a pencil and a rule*.

1. \_\_\_\_\_

2. \_\_\_\_\_

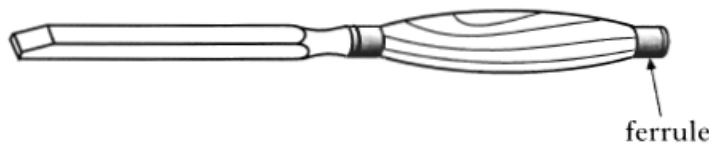
2

(ii) State the name of the hand saw used to cut the joint on the rail.

\_\_\_\_\_

1

(d) The tool shown below was used to cut the slot in the leg.



(i) State the name of this tool.

\_\_\_\_\_

1

(ii) State the purpose of the ferrule.

\_\_\_\_\_

1

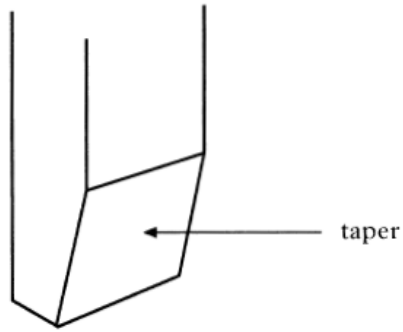
(iii) Describe how to check that the slot in the leg is cut to the correct depth.

\_\_\_\_\_

\_\_\_\_\_

1

(e) Part of the leg is shown below.

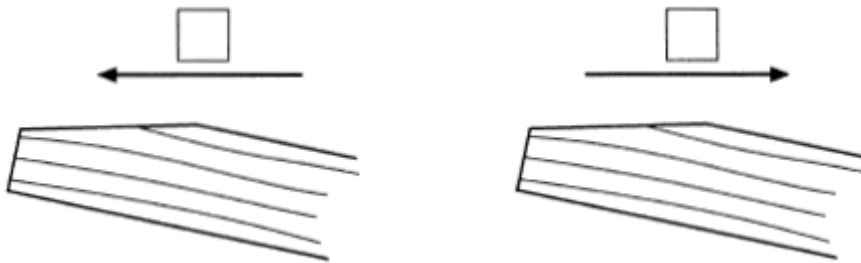


(i) State the name of the tool used to make the taper on the leg.

\_\_\_\_\_

1

(ii) In which direction should this tool be used when finishing the taper? (*Tick one*).



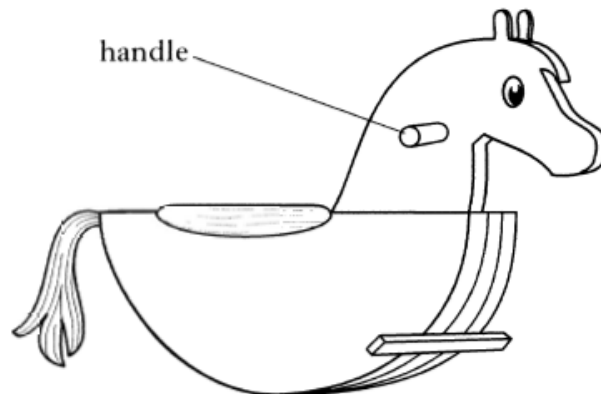
1

(iii) State a reason for your answer.

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

1

3. A sketch of a rocking horse to be made from manufactured board is shown below.



(a) (i) State one reason for using manufactured board.

\_\_\_\_\_

1

(b) (ii) State the name of a suitable manufactured board.

\_\_\_\_\_

1

(c) A pedestal drill is used to make the hole for the handle.  
State **two** safety precautions, **other than wearing eye protection**, which should be taken before using the drill.

1. \_\_\_\_\_

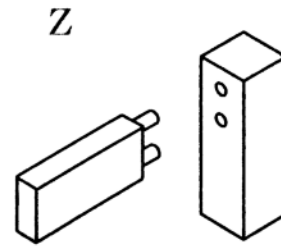
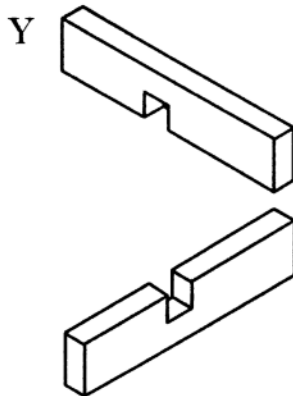
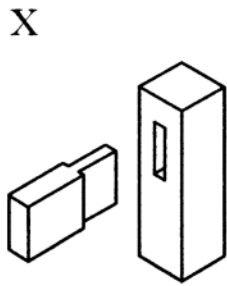
\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

2

1. (a) A selection of woodwork joints is shown below. State the name of each joint.



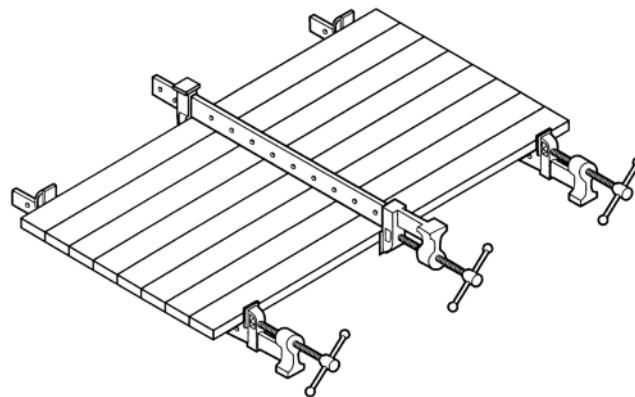
Joint X \_\_\_\_\_

Joint Y \_\_\_\_\_

Joint Z \_\_\_\_\_

3

(b) The table top is made from strips of wood. They are ‘dry clamped’ together as shown below.



(i) State the name of the tools used to clamp the wood.

\_\_\_\_\_

1

(ii) Explain what is meant by the term ‘dry clamping’.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1

(c) State the name of the portable machine that can be used to smooth the top surface after planing.

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(d) State the name of a coloured finish for the table *other than paint*.

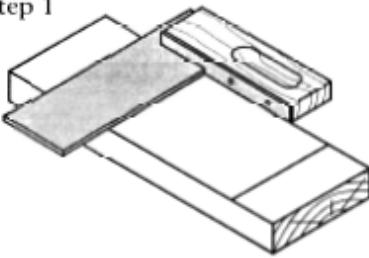
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1

1

2. The following sequence shows how to make a sloping slot in wood.

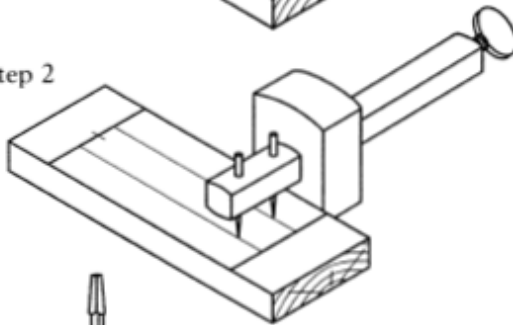
Step 1



**Description**

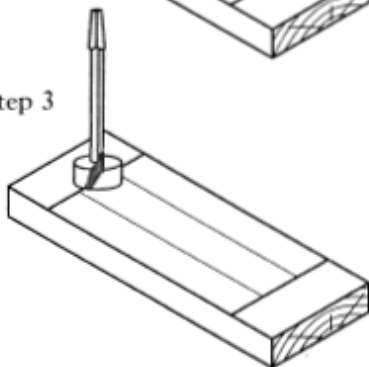
Use a pencil to square lines across the grain 30 mm from each end.

Step 2



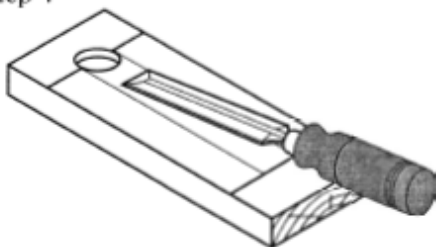
Gauge two lines 12 mm apart in the centre of the face.

Step 3



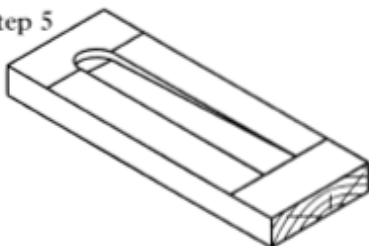
Drill down 5 mm for a flat bottomed hole.

Step 4



Start with a chisel at the hole and cut back from it to get the sloping groove.

Step 5



Finished product.

(a) (i) State the name of the gauge shown in step 2.

---

1



(ii) State the name of the bit shown at Step 3.

\_\_\_\_\_

1

(b) State a safety precaution that should be observed when using a chisel.

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

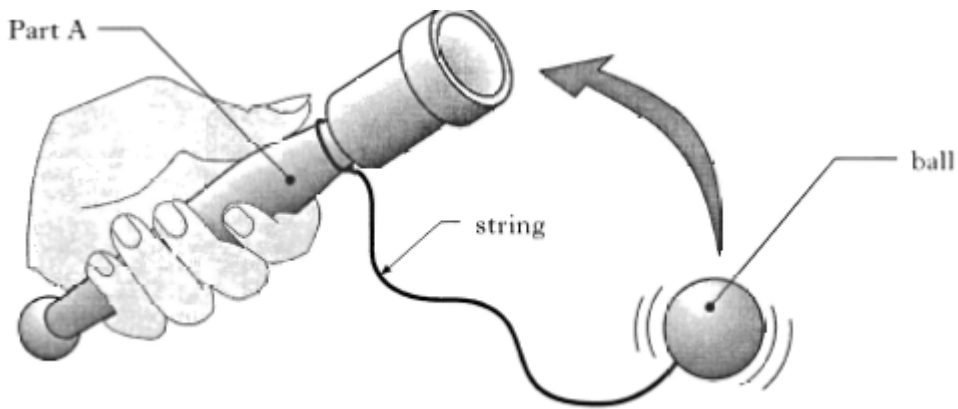
1

(c) State the name of a suitable abrasive paper used to remove pencil marks.

\_\_\_\_\_

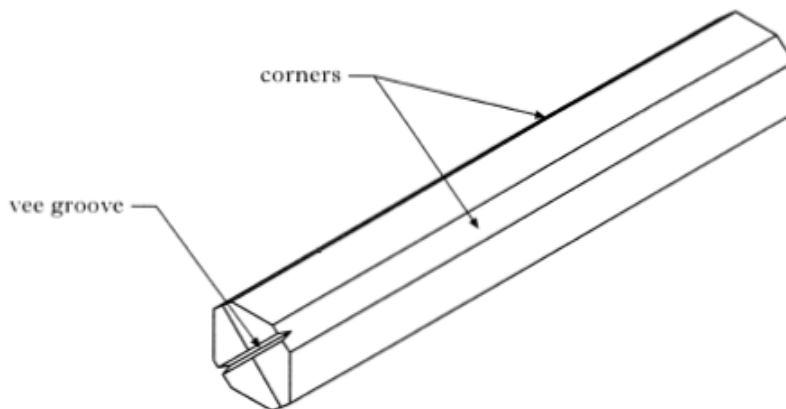
1

3. A wooden toy is shown below.



(a) Part A was made on a machine. State the name of this machine.

(b) The wooden blank used to make part A is shown below.



(i) State the name of a suitable hand tool used to remove the corners.

\_\_\_\_\_

1

(ii) State the name of the saw used to cut the 'vee' groove.

\_\_\_\_\_

1

(c) The tool below was used when turning the blank.



(i) State the name of this tool.

\_\_\_\_\_

1

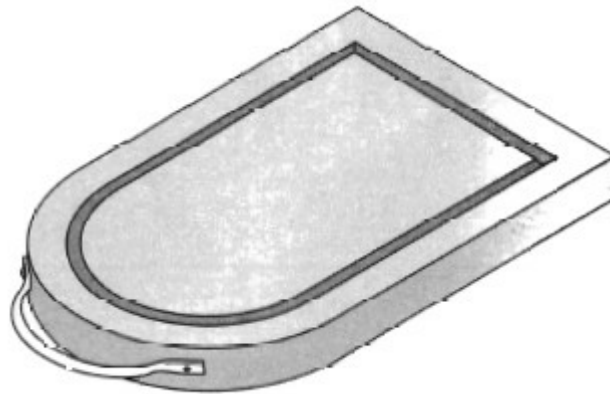
(ii) State a reason why the handle on this tool is long.

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

1

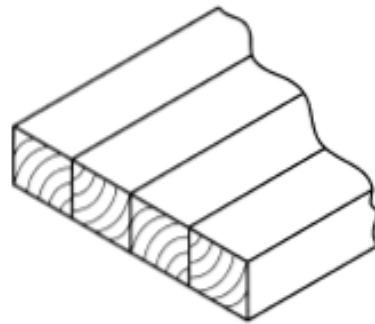
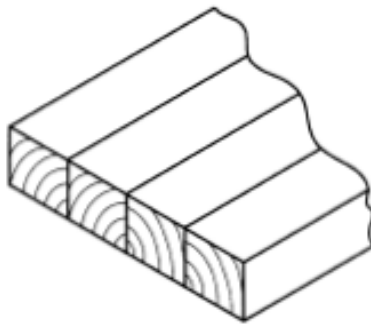
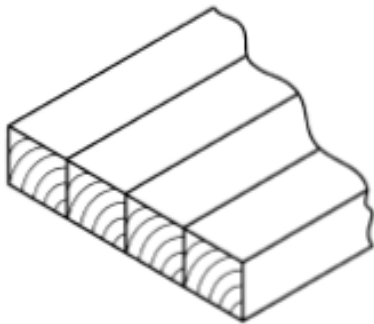
1

1. A wooden food preparation board is shown below:



(a) Strips of wood are glued together to form the board.

(i) Tick the box to indicate the correct method of gluing the strips of wood together.



1

(ii) State with reference to your answer, why the strips of wood are arranged in this way.

---

---

1

(iii) State a reason why a **waterproof** adhesive was used in the construction of the board.

---

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1

(b) The handle was attached to the board using the wood screw shown.



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

\_\_\_\_\_

(ii) State a reason for using a wood screw with this shape of head.

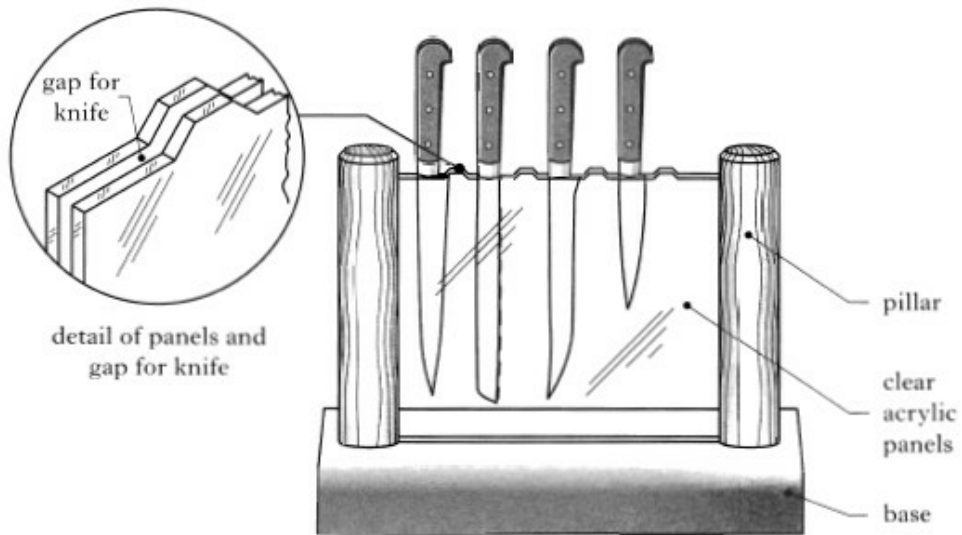
\_\_\_\_\_

\_\_\_\_\_

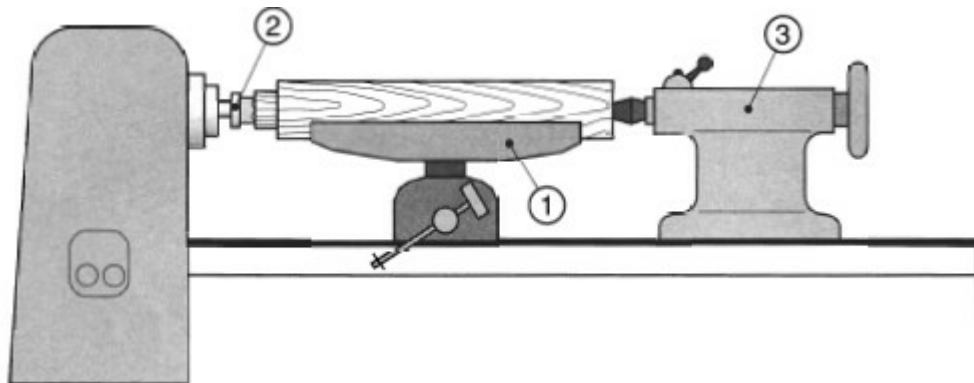
1

1

2. A kitchen knife holder is shown.



The pillars were turned on the wood lathe as shown below.



(a) State the names of the parts 1,2 and 3 using the words below to help you.

*Revolving centre Tailstock Headstock Fork centre Tool rest*

Part 1 \_\_\_\_\_

Part 2 \_\_\_\_\_

Part 3 \_\_\_\_\_

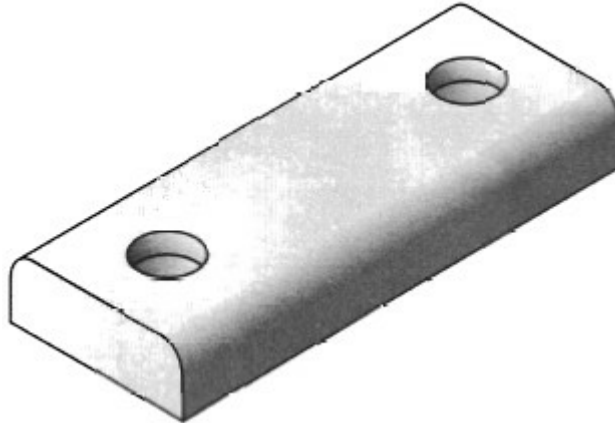
3

- (b) State the name of the tool used to check the diameter of the pillar while it is still on the lathe.

\_\_\_\_\_

1

- (c) Flat bottomed holes were drilled in the base as shown.

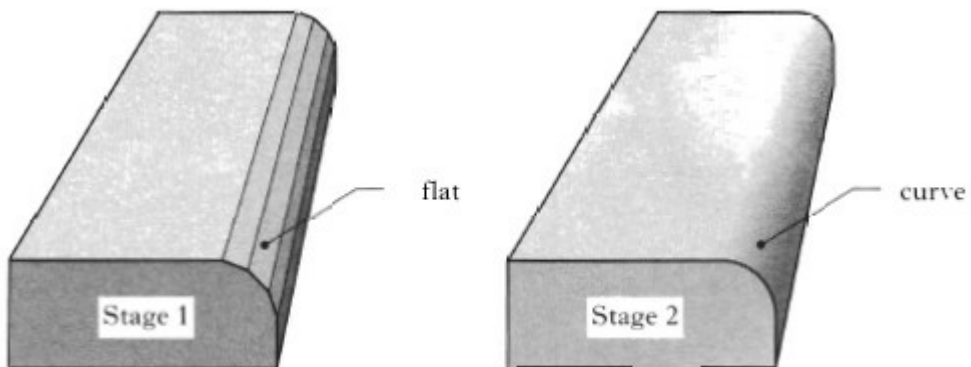


State the name of a suitable drill bit that could be used to drill the flat bottomed holes.

\_\_\_\_\_

1

- (d) The edges of the base were rounded as shown.



- (i) State the name of the hand tool used to remove the excess material at stage 1.

\_\_\_\_\_

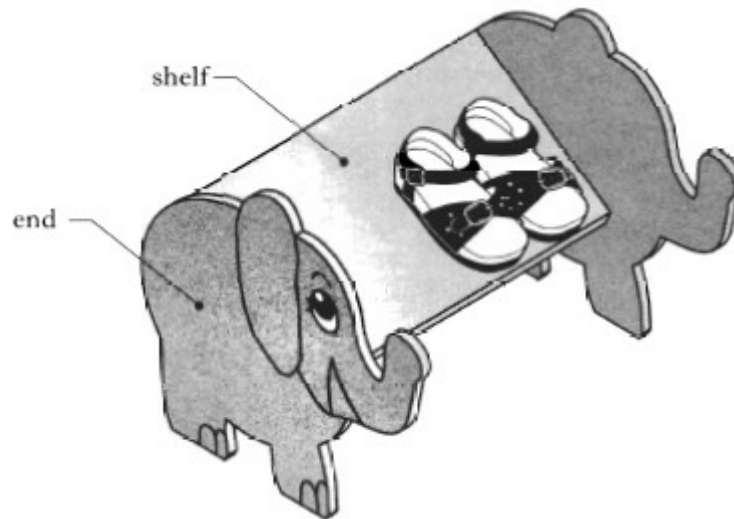
1

- (ii) State the name of an abrasive paper used to finish the curve at Stage 2.

\_\_\_\_\_

1

3. A rack to store and display children's shoes is shown.



1

(a) The shoe rack is made from a manufactured board.

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

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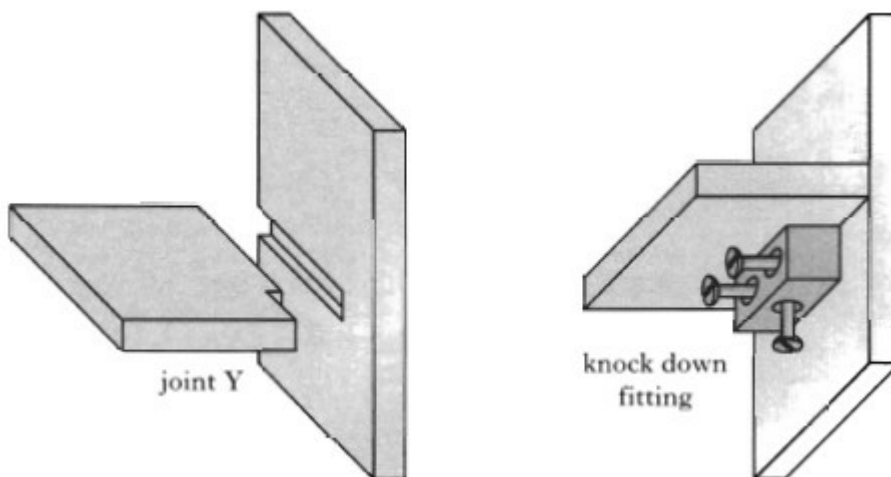
1

(ii) State one benefit of using a manufactured board instead of solid wood.

---

1

(b) Two methods of attaching the shelf to the ends of the rack are shown.



(i) State the name of Joint Y.

---

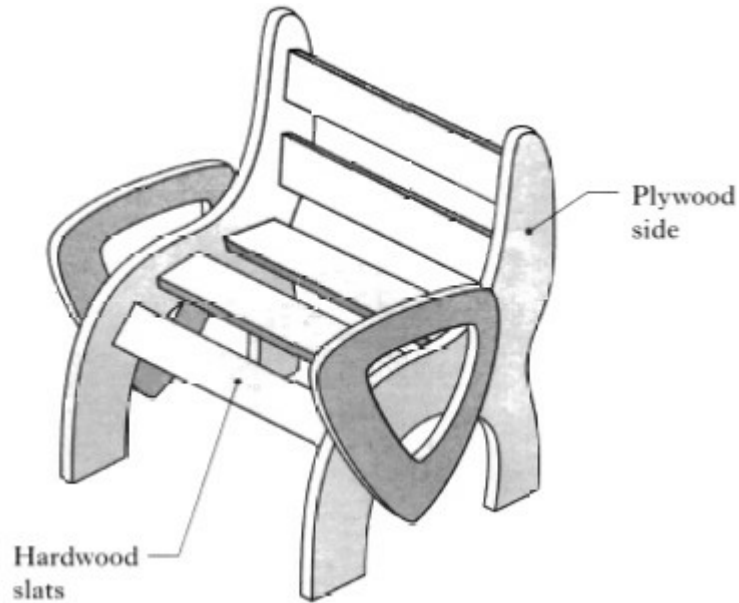
1

(ii) State the advantage of using a knock-down fitting instead of Joint Y.

---

1

1. A garden chair is shown below.



(a) The chair was made of hardwood and plywood.

State the name of a suitable hardwood.

\_\_\_\_\_

1

(b) State one advantage of using plywood instead of a hardwood for the sides.

\_\_\_\_\_

1

(c) State a method of ensuring that the sides of the chair are identical.

\_\_\_\_\_

1

(d) The following machine tools were used in the manufacture of the chair.

State the name of **each** machine tool shown.



\_\_\_\_\_



\_\_\_\_\_

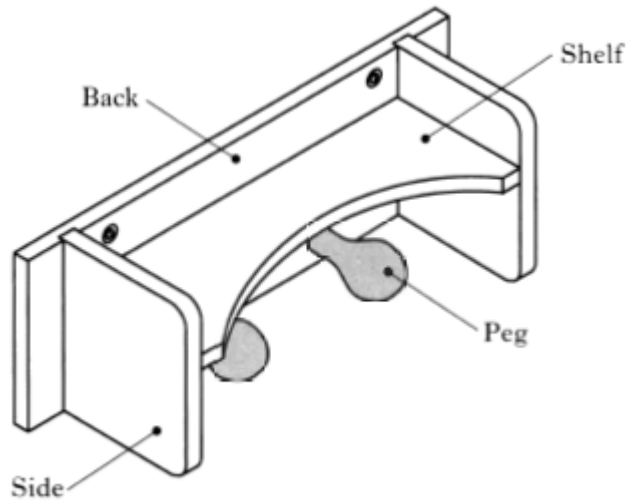
2

- (e) A finish which allowed the grain of the wood to be seen was applied to the chair.  
State the name of a suitable finish.

---

1

2. A wall mounted unit is shown below.

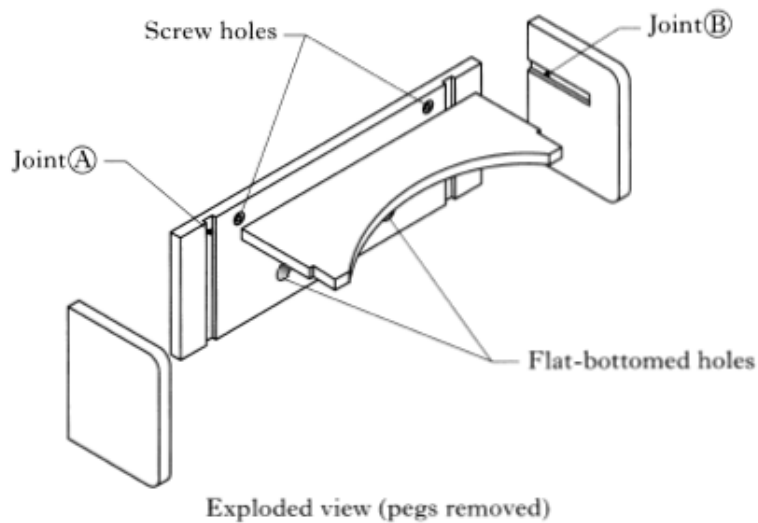


- (a) The unit was made from a softwood.  
State the name of a suitable softwood.

---

1

- (b) The joints shown below were used in the manufacture of the unit.



- (i) State the name of Joint A.  
\_\_\_\_\_
- (ii) State an advantage of Joint B over Joint A  
\_\_\_\_\_

1

1



(iii) The tool shown below was used to drill the flat bottomed holes in the back.

State the name of this tool.



\_\_\_\_\_

1

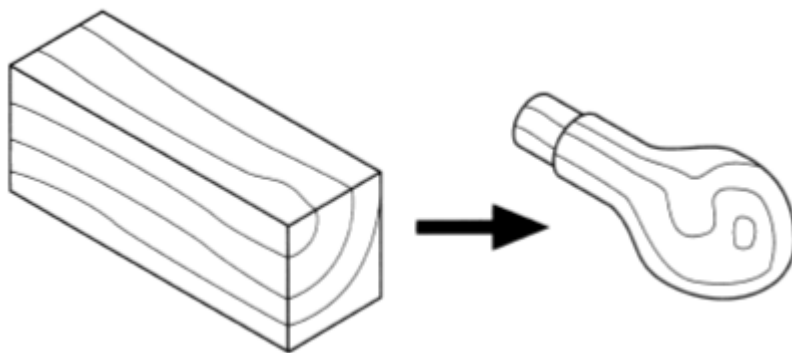
(c) The softwood was prepared for a protective finish.

State two stages in the preparation of the softwood before the finish was applied.

Stage 1 \_\_\_\_\_  
\_\_\_\_\_

Stage 2 \_\_\_\_\_  
\_\_\_\_\_

(d) Each peg was turned from a wooden blank as shown below.



(i) State the name of the machine used to turn the pegs.

\_\_\_\_\_

(ii) Describe three stages in the preparation of the wooden blank prior to turning.  
*Sketches may be used to illustrate your answer.*

Stage 1 \_\_\_\_\_  
\_\_\_\_\_

Stage 2 \_\_\_\_\_  
\_\_\_\_\_

Stage 3 \_\_\_\_\_  
\_\_\_\_\_