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6030/01

October/November 2007

2 hours 45 minutes

Additional Materials:

- A2 Drawing Paper (1 sheet)
- Answer Paper
- Coloured crayons
- Metric scale rule, scale 1:5
- Standard drawing equipment

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** parts of Section 1 Part A.
Write your answers in the spaces provided on the Question Paper.

Answer any **two** questions.
Write your answers on the separate Answer Paper provided.

Answer **all** parts of this section.
Use the A2 sheet of Drawing Paper prepared prior to the examination
for your answers.
All dimensions are in millimetres.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [] at the end of each question or part question.

For Examiner's Use		
Section IA		
Section IB	9	
	10	
	11	
	12	
Section II		
TOTAL		

This document consists of **10** printed pages and **2** blank pages.

Section I Part A

Answer all questions from this Part in the spaces provided on the Question Paper.

You are advised to spend no longer than 35 minutes on this Part.

- 1 Fig. 1 shows three fixings for joining wood.

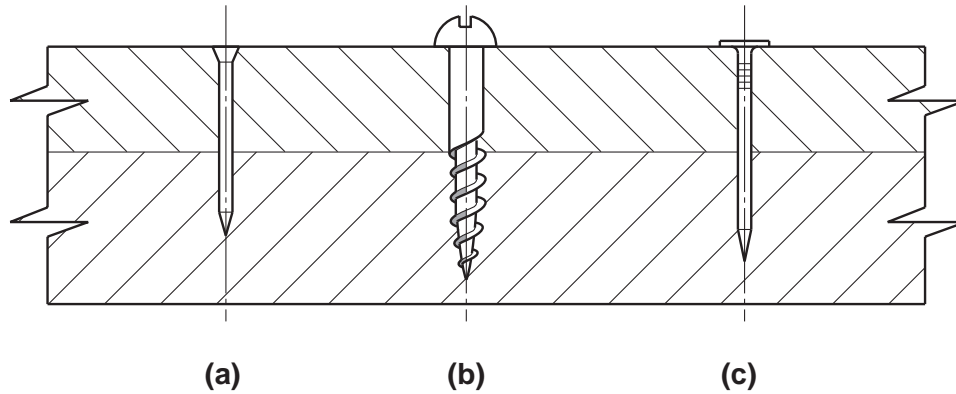


Fig. 1

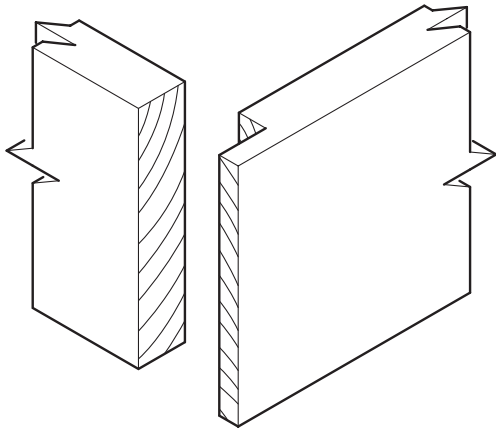
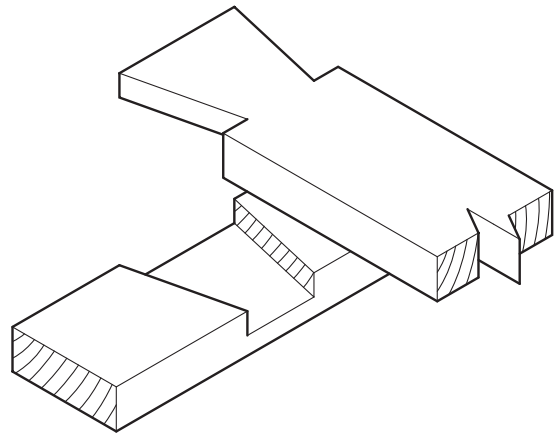
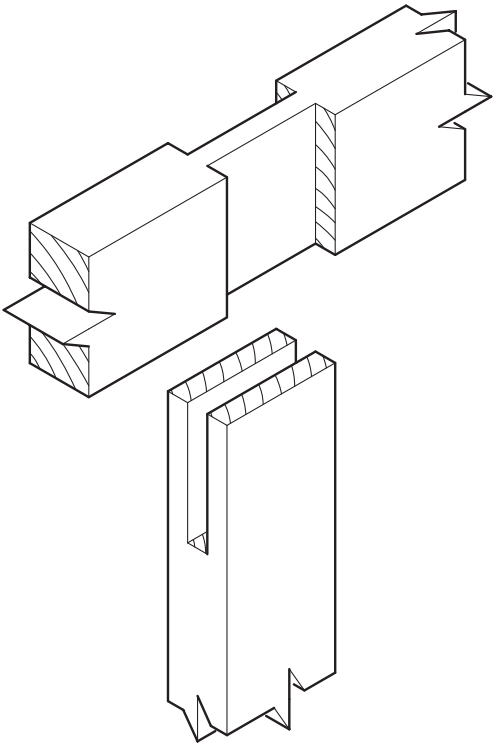
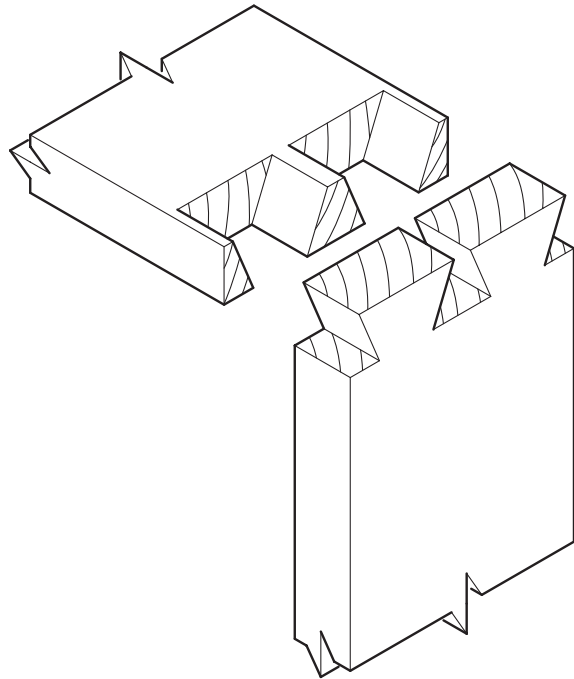
Name each fixing.

Fixing **(a)**

Fixing **(b)**

Fixing **(c)**[3]

2 Fig. 2 shows four joints which are used in construction.

**A****B****C****D****Fig. 2**

Name each joint.

Joint **A**

Joint **B**

Joint **C**

Joint **D**[4]

- 3 Personal safety has to be considered when using sharp edged tools. Give **three** safety rules that must be obeyed when using chisels in a workshop.

Rule 1.....

.....

Rule 2.....

.....

Rule 3.....

.....[3]

- 4 Fig. 3 shows a piece of wood marked out ready for preparing to size.

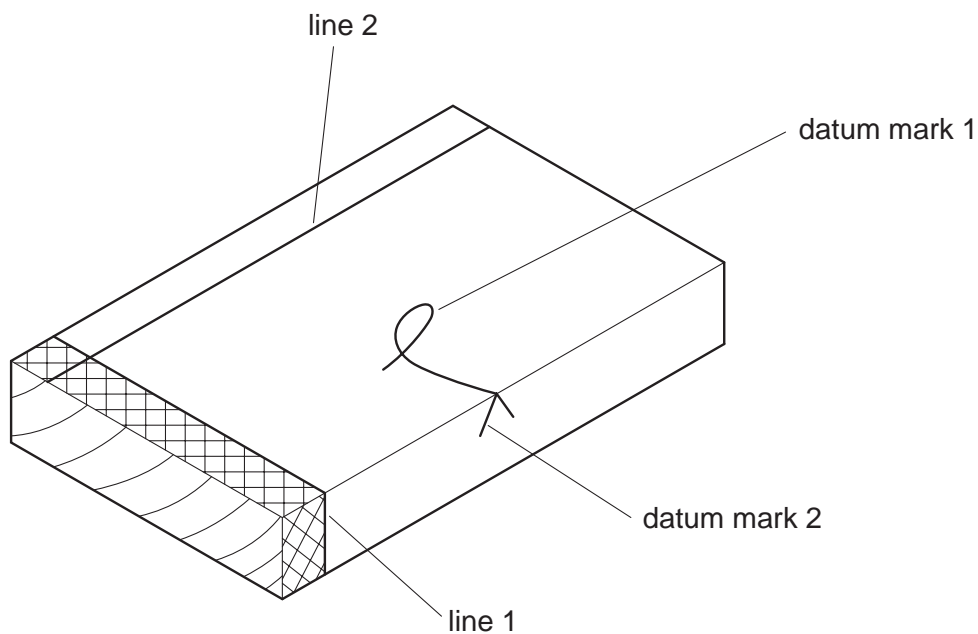


Fig. 3

- (a) Name the tool you would use to mark line 1.

.....

- (b) Name the tool you would use to mark line 2.

.....

- (c) Name datum mark 1

- (d) Name datum mark 2 [4]

- 5 Fig. 4 shows a solid wooden shelf to be mounted on a wall.

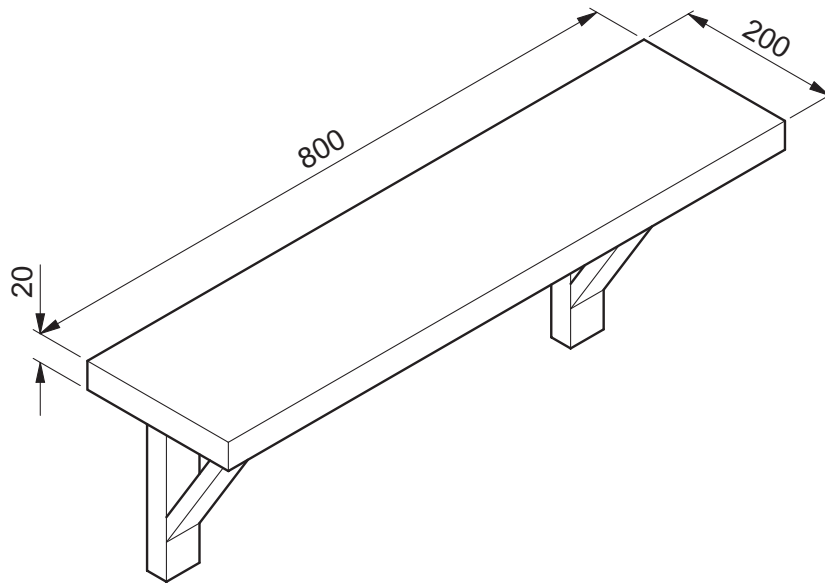


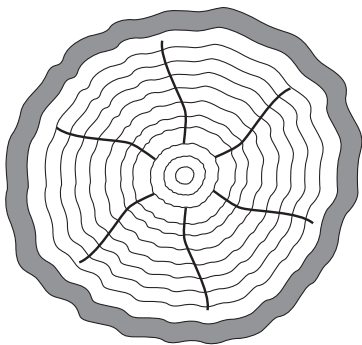
Fig. 4

Draw on Fig. 4 to show:

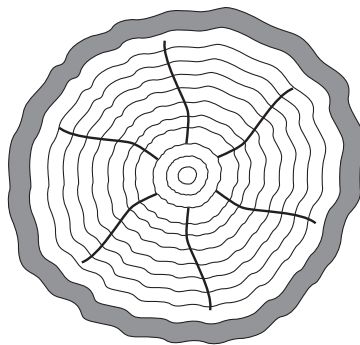
- (a) the grain direction;
- (b) the end grain.

[2]

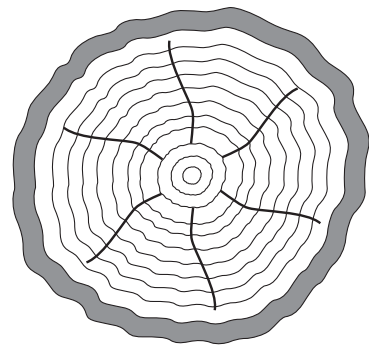
- 6 On the cross section of tree trunks in Fig. 5, add lines to show the cuts for live/through and through conversion, quarter sawing and radial sawing.



Live/Through and Through



Quarter Sawing



Radial Sawing

Fig. 5

[3]

- 7 (a) Give the main reason for converting the tree by the live/through and through conversion method.

.....

.....

- (b) Give the main reason for converting the tree by the quarter sawn or radial methods.

.....

.....[2]

- 8 Fig. 6 shows a hand tool.

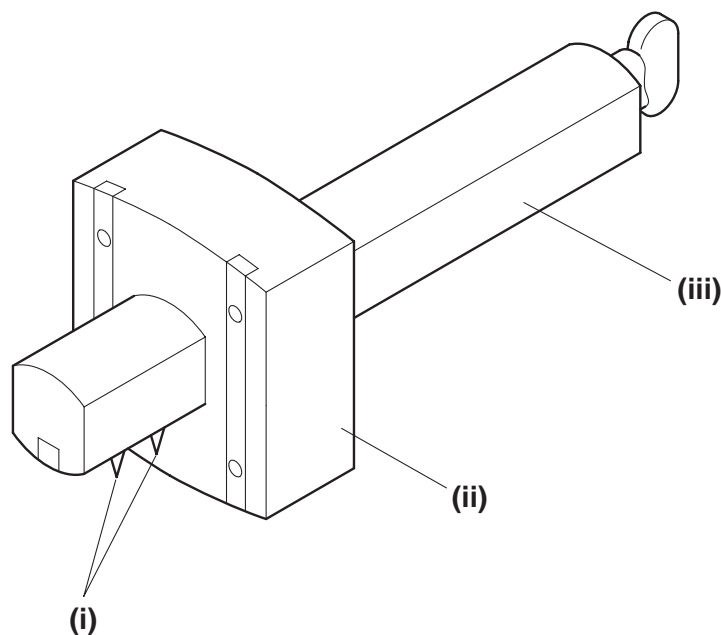


Fig. 6

- (a) Name the parts:

(i)

(ii)

(iii)[3]

- (b) Describe briefly what the tool is used for.

.....

.....[1]

Section I Part B

Answer any **two** questions from this Part on the separate answer paper provided.

You are advised to spend no longer than 35 minutes on this Part.

- 9 Fig. 7 shows a joint used in box construction.

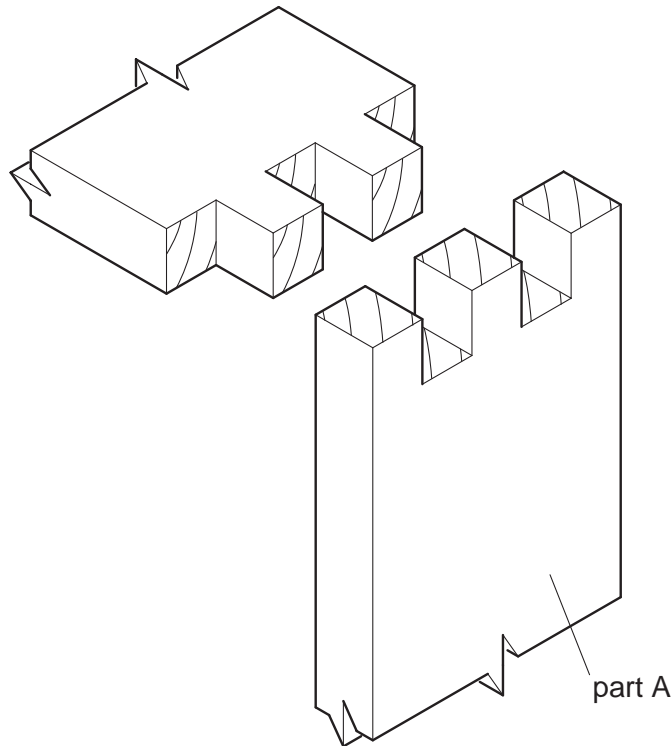


Fig. 7

- (a) Name the joint. [1]
- (b) Using notes and sketches, and naming all tools, describe how you would:
- (i) mark out the joint as shown on Part A; [5]
- (ii) remove the wastewood to form the joint. [6]
- 10 Wood has to go through various processes from the time it is cut down to when it is ready for use.
- (a) Name the process of cutting the tree down. [1]
- (b) Name the process of cutting the trunk into boards. [1]
- (c) Name the two main methods of drying the boards. [2]
- (d) Use notes and sketches to describe the fastest method of drying boards so that the wood is at the correct moisture content for use. [8]

- 11 Fig. 8 shows a small table. The underframe is solid wood. The top of the table is made from 18 mm plywood which has been veneered with hardwood. The edgings are solid hardwood 10 mm thick.

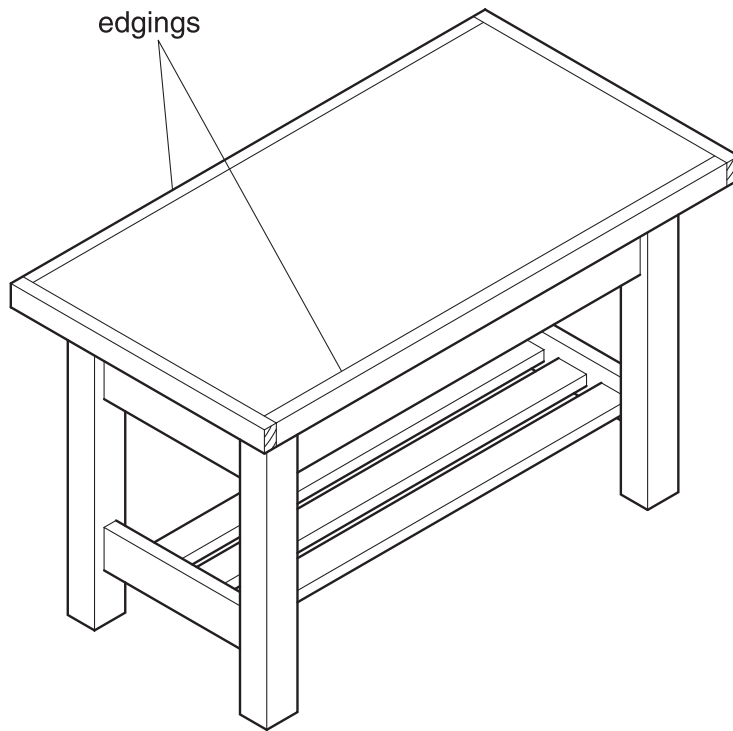


Fig. 8

The edgings have to be glued and cramped to the top.

Using notes and sketches, describe how you would:

- (a) glue the two opposite edgings to the top; [6]
 - (b) clean up the top after the edgings are glued so that the surfaces are flush. Include details of how the top is safely held during cleaning up and name the tools used. [6]
- 12 (a) Sketch a cross section of a hardwood tree trunk and label **six** parts that are important in the life of the tree. [6]
- (b) Briefly explain the purpose of each part labelled in (a). [6]

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Turn to page 10 for Section II.

Section II Drawing and Design

Answer **all** questions from this Section on the previously prepared Drawing Paper.

Use only **one** side of the Drawing Paper.

You will be required to draw part of this section to a scale of 1 : 5.

You are advised to spend 1 hour 35 minutes on this Section.

On your drawing paper use the space to the right of the vertical line to answer Part C of this Section and the space to the left to answer Part D.

Fig. 9 on page 11 shows details of a patio chair. Any dimensions not given are left to your discretion.

Part C

Sketch freehand and approximately half full size:

- (i) an exploded view of the joint you would use to join the armrest to the back leg at **A**; [8]
- (ii) an exploded view of a different joint which you could use to join the front leg to the arm rest at **B**. [8]

Part D

- (a) Draw in first or third angle orthographic projection, using a scale of 1 : 5 (hidden detail is not required):
 - (i) a front view in the direction of arrow **Y**; [10]
 - (ii) a sectional end view through the centre of the chair on the line **XX**; [8]
 - (iii) a plan. [5]
- (b) Add to your drawings **six** main dimensions. [3]
- (c) In the Title Box include the following details in suitable lettering:
 - (i) a title;
 - (ii) your name;
 - (iii) your examination number;
 - (iv) the projection you have used. [3]
- Marks for quality. [3]
- Marks for layout. [2]

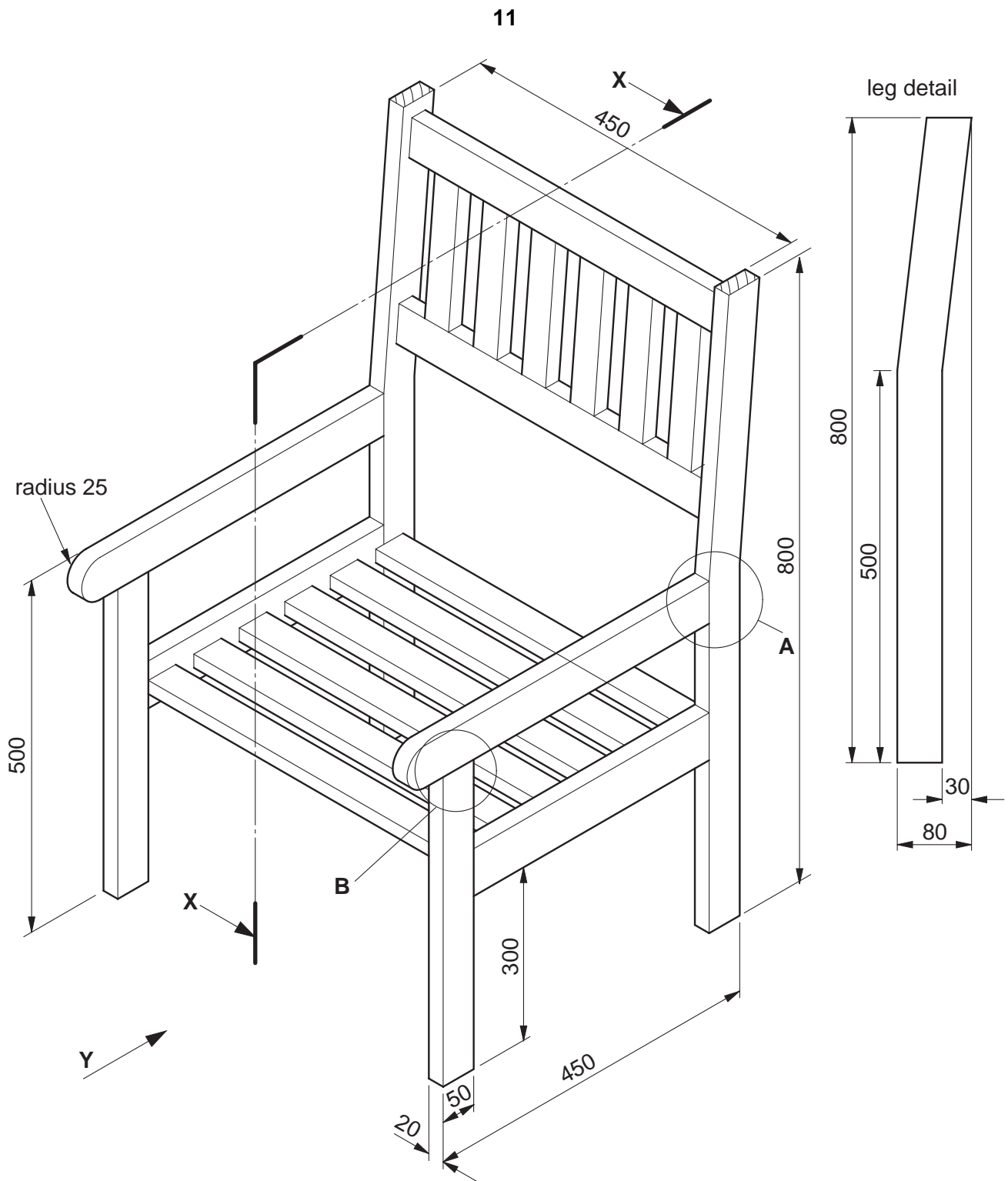


Fig. 9

All seat and backrest slats are 40 wide x 20 thick.

All end frame members are 50 wide x 20 thick.

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