



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Cycle Final Examination 2023

Wood Technology

Common Level

Thursday 15 June Afternoon 1:30 - 3:00

120 marks

Examination Number

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Day and Month of Birth

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For example, 3rd February is
entered as 0302

Centre Stamp

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Instructions

Answer all questions.

Write your answers in blue or black pen. You may use pencil for sketches and drawings only.

Write your answers in the spaces provided in this booklet. There is space for extra work at the end of the booklet. Label any such extra work clearly with the question number and part.

This examination booklet will be scanned and your work will be presented to an examiner on screen. Anything that you write outside of the answer area may not be seen by the examiner.

Question 1

Furniture maker crafts native Irish woodland in Wicklow

Planting trees has emerged as a low-cost, high-impact way of tackling the climate crisis. The furniture maker shown has planted more than 2,000 native trees on four acres of land at his home in Co. Wicklow. *"What we have done here, we've planted native trees from native stock. Within 20 years, we have created a lovely woodland and native plants are gradually coming in. It's becoming a woodland. It's a future forest."*



- (a) (i) Give **two** reasons why this furniture maker has chosen to plant native Irish trees.

Reason 1:
Reason 2:

- (ii) The images show the leaves of three native Irish trees. From the following list, identify **each** tree leaf.

Scots Pine, Holly, Oak



- (b) The image shows the furniture maker walking through his forestry plantation.



- (i) Discuss **two** benefits forestry has for people or our environment.

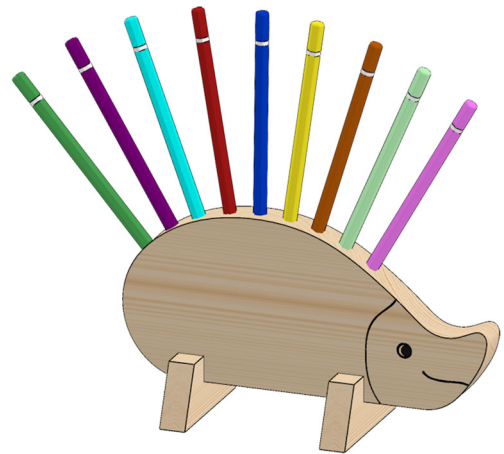
Benefit 1:
Benefit 2:

- (ii) Describe, using notes and freehand sketches, **two** characteristics of a coniferous tree.

Characteristic 1:	Characteristic 2:

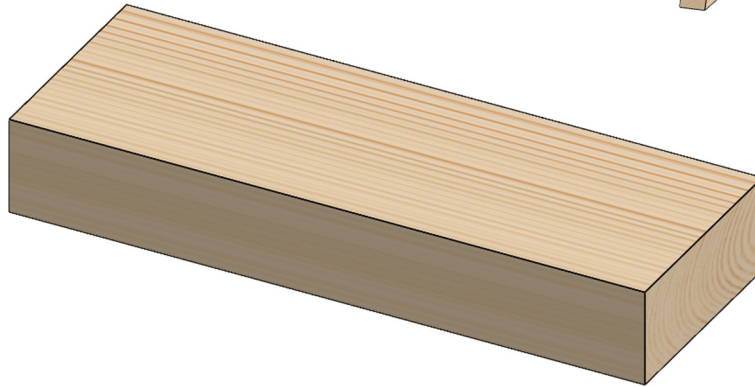
Question 2

The image shows a child's colouring pencil stand which is in the shape of a hedgehog and made from solid wood as shown.



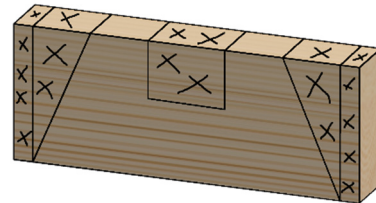
- (a) The image below shows a piece of wood to be used for one leg of the pencil stand.

Draw the marks for the **face side** and **face edge** in the correct positions on the piece of wood.



- (b) The image on the right shows the leg of the pencil stand marked-out.

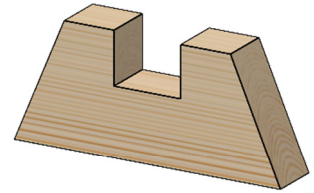
Name and sketch **one** tool that would be used to mark-out the leg as shown.



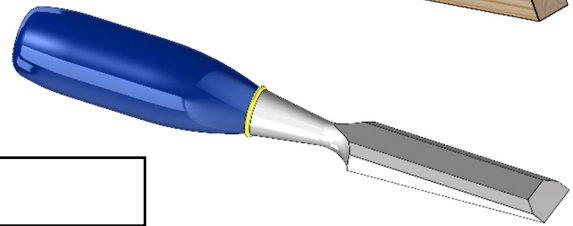
Tool name:

Sketch:

- (c) (i) The image on the right shows the leg for the pencil stand after the trench has been removed.



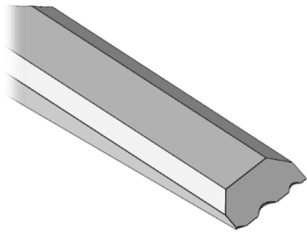
Name the tool shown, which is used to remove the trench.



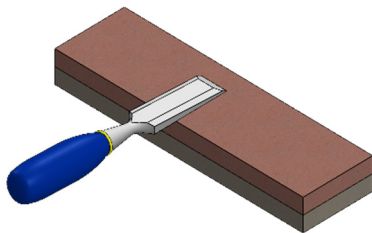
Name:

- (ii) The images on the left below show some of the steps used to sharpen the tool above. Shown on the right is the description for each step.

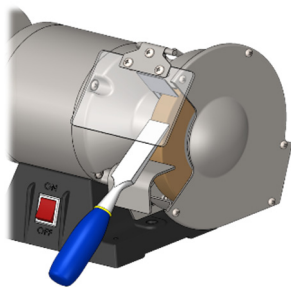
Match each of the steps shown on the left with its correct description on the right. The first one is completed for you.



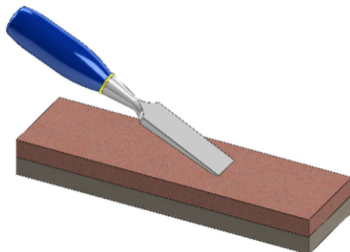
The damaged cutting edge is ground down using a bench grinder



Check the damage on the cutting edge



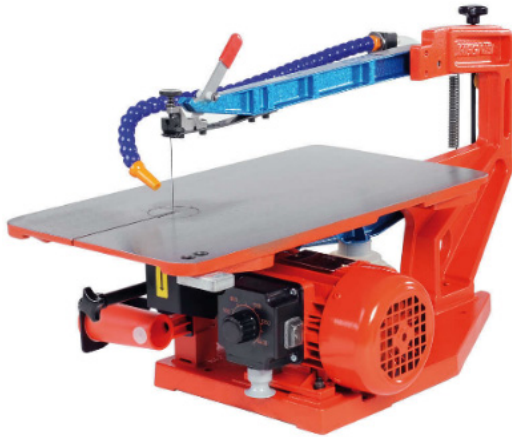
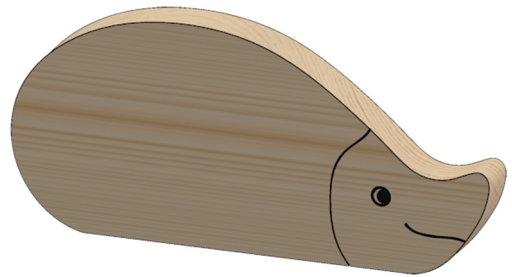
The burr is removed from the back of the blade



An oilstone is used to hone the cutting edge sharp

- (d) A saw must be selected to shape the hedgehog pencil stand as shown.

State the correct name for **each** of the saws below and give **one** advantage of using each saw to shape the pencil stand.



Name:
Advantage:



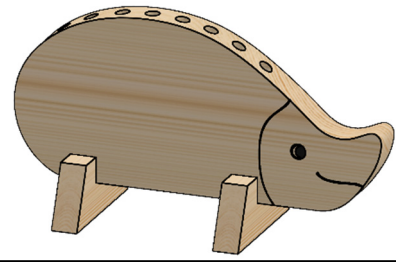
Name:
Advantage:

- (e) Give **two** reasons why it is necessary to apply a surface finish to the pencil stand.

Reason 1:
Reason 2:

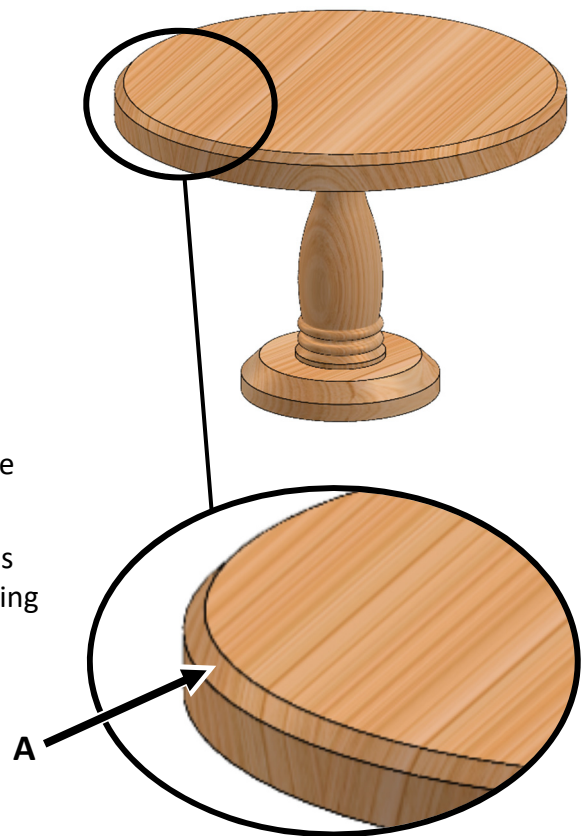
- (f) In the space below, design a poster to explain any **two** of the steps required to apply a clear finish to the pencil stand.

On your poster include notes on each step **and** the name of your chosen finish.



Question 3

The image shows a cake stand which is made from solid wood.



- (a) The top of the cake stand is finished with an edge moulding as shown.

Using a tick (✓) indicate the correct name for this moulding and give **one** reason to add this moulding to the cake stand.

Chamfer

☐

Gauge

☐

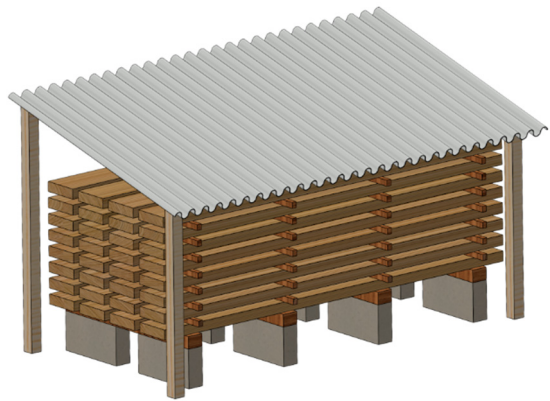
Reason:

- (b) Suggest a suitable hardwood for the cake stand.
Give **one** reason for your choice of hardwood.

Hardwood:

Reason:

- (c) It is important that wood for the cake stand is properly seasoned. The image shows a method of seasoning wood.



- (i) Name this method of seasoning.

Name:

- (ii) Give **two** advantages of using this method of seasoning.

Advantage 1:

Advantage 2:

- (iii) Name **one** other method of seasoning wood.

Name:

- (iv) Indicate with a tick (✓) whether each of the following statements is true **or** false.

Seasoning	True	False
Seasoning reduces the moisture content in the wood		
Wood is easier to work after seasoning		
Seasoning can cause insect and fungal attack in wood		
Wood becomes heavier after it has been seasoned		

- (d) The image shows a woodturning lathe which is used to turn the cake stand.



- (i) State the correct name for **each** part of the lathe shown above.

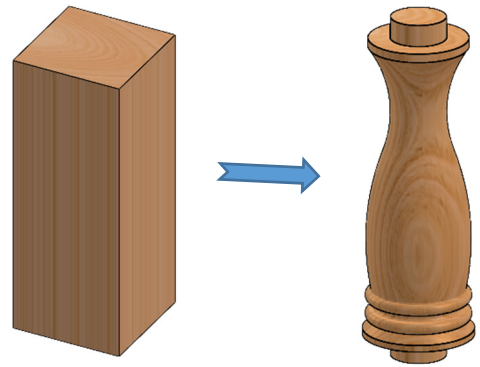
A:
B:

- (ii) List **two** specific safety precautions that should be observed when using a woodturning lathe.

Precaution 1:
Precaution 2:

- (e) The image on the left shows a block of wood. This block is to be woodturned to form the pedestal, as shown on the right.

With the aid of notes and neat freehand sketches, describe **two** steps needed to **prepare** the block for mounting on the lathe.

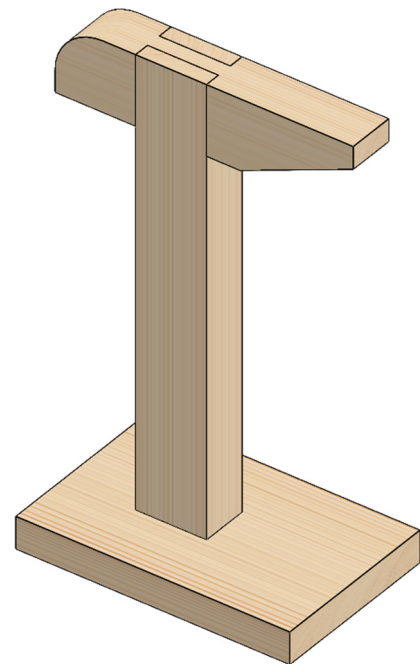


Step 1:

Step 2:

Question 4

The image shows an initial design idea for a gaming headset stand which is made from wood.



- (a) Investigation/research should be carried out when designing a gaming headset stand in Wood Technology.

- (i) Discuss **two** considerations that should be investigated/researched when designing a headset stand.

Consideration 1:
Consideration 2:

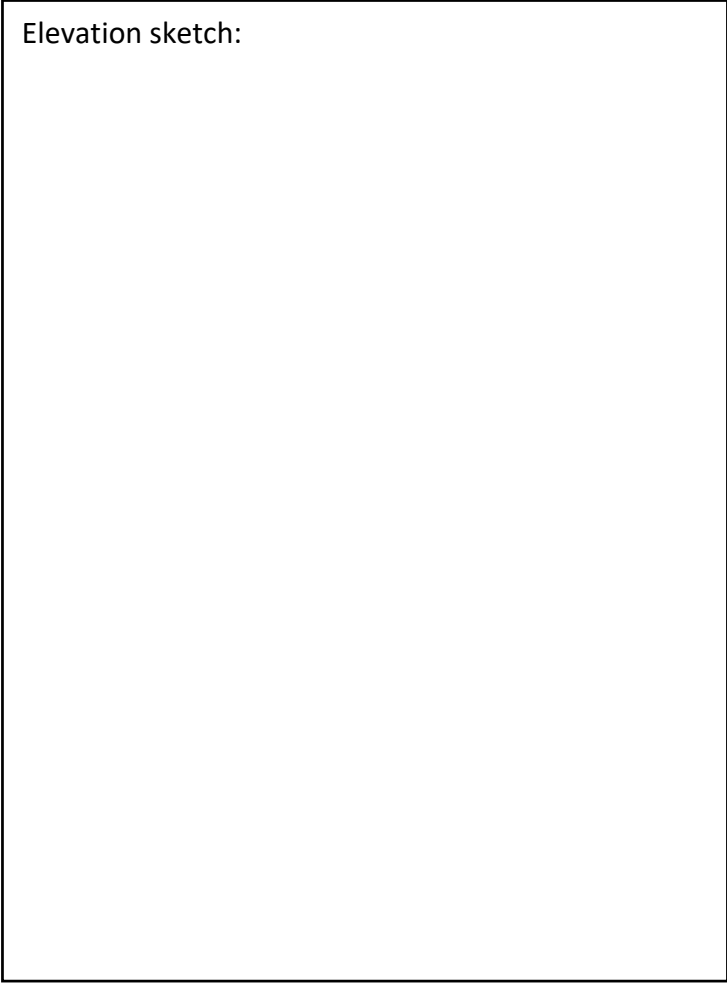
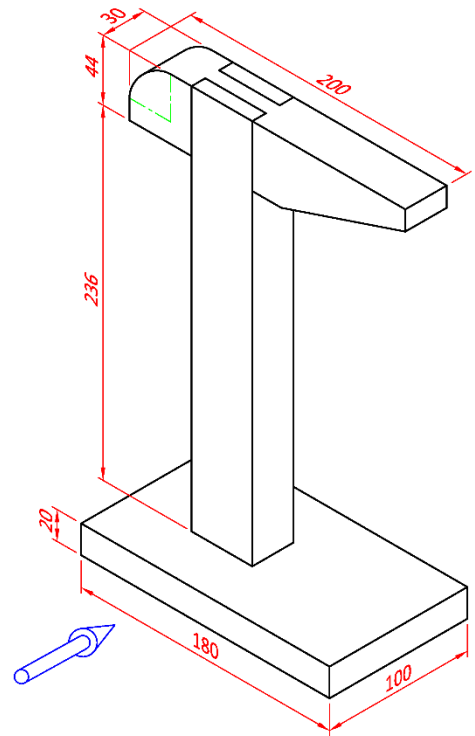
- (ii) Using a tick (✓) indicate which of the following are primary research **or** secondary research.

Research	Primary	Secondary
Carrying out an interview		
Using the Internet to download images		
Looking up information in a Wood Technology book		
Taking pictures of other similar objects in a shop		

(b) The image shows a dimensioned drawing of the headset stand.

(i) In the space below, draw a neat freehand sketch of the **elevation** of the stand looking in the direction of the arrow.

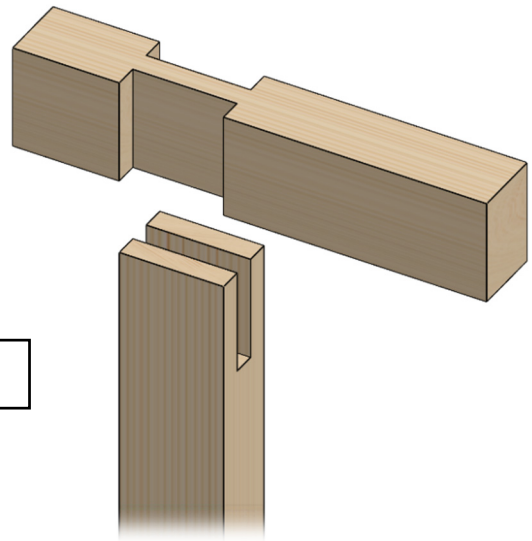
Elevation sketch:

(ii) Complete the cutting list for the given headset stand in the table below.

Description	Quantity	Length	Width	Thickness
Base	1		100	20
Middle support	1		44	30
Top of stand	1	200		30

- (c) The image on the right shows a woodwork joint being considered to joint the middle support to the top.



- (i) Name the joint shown.

Name:

- (ii) Give **one** advantage and **one** disadvantage of using the joint, shown above.

Advantage:

Disadvantage:

- (iii) Name and sketch **one** other possible joint that could be used to joint the middle support to the top.

Joint name:

Sketch:

- (d) Using a neat freehand sketch with annotations to communicate your idea, redesign the given headset stand to include a facility to hold two gaming controllers.

The controllers should be easily accessible and stored on the stand.



Sketch:

[illegible]

Acknowledgements

Images

Image on page 3: <https://www.rte.ie/news/2022/0730/1312971-furniture-native-woodland/>

Image on page 3: <https://www.thegrove3d.com/twigs>

Image on page 3: <https://www.pinterest.co.uk/pin/293156256966511819/>

Image on page 3: https://www.pngitem.com/middle/obhmi_holiday-garland-clipart-corner-46596

Image on page 4: <https://www.rte.ie/news/2022/0730/1312971-furniture-native-woodland/>

Image on page 5: <https://www.dreamstime.com/stock-photo-cross-section-tree-trunk-isolated-white-background-image51444054>

Image on page 8: <https://www.hegner.co.uk/products/machine-tools>

Image on page 8: https://www.bahco.com/int_en

Image on page 12: <https://www.recordpower.co.uk/product/cast-iron-electronic-variable-speed-lathe>

Image on page 17: <https://twitter.com/AskPlayStation/status/1507107509982670852/photo/1>

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Wood Technology

Thursday 15 June

Afternoon 1:30 - 3:00