



DEPARTMENT OF  
EDUCATION

LOWER  
SECONDARY  
SCHOOL  
CERTIFICATE  
EXAMINATION  
(LSSCE)

**PRACTICAL  
SKILLS**

Wednesday

14<sup>th</sup> October 2015

Time allowed

1 hour 30 minutes

1:00 pm – 2:30 pm

Candidates are advised  
to fully use the time  
allocated

PS

### INSTRUCTIONS TO CANDIDATES:

*(To be read out by the external invigilator before the start of the examination)*

There are **36** questions in this paper. Attempt **ALL** questions even if you are not so sure of some of the answers.

The Examination is divided into three parts:

**PART A: Multiple Choice (Questions 1 to 20)**

**PART B: Short Answer (Questions 21 to 35)**

**PART C: Extended Response (Question 36)**

The Answer Sheet is part of the Examination Booklet. Take out the middle pages and remove the Answer Sheet by tearing along the perforation. You may use the blank sheet for rough work.

Write your province code, school code, candidate number, name and school name in the space given on the **ANSWER SHEET**.

For each question in **PART A (Questions 1 – 20)**, choose the correct answer by writing the letter A, B, C or D in the space provided on the **ANSWER SHEET**.

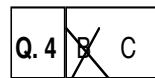
For each question in **PART B** and **PART C (Questions 21 – 36)**, work out the answer and write the answer in the space provided on the **ANSWER SHEET**.

If you find a question very difficult, do not spend too much time thinking about it. Skip the question and go on with the rest of the paper. If you have time in the end, return to the difficult questions and think about them more carefully.

Write your answers in **BLUE** or **BLACK** ink (pen or biro).

If you decide to change an answer, make your correction as shown below so that it is clear to the markers what your final answer is. Do **NOT** use correction fluid on your answer sheet.

#### Example



Hand in **BOTH** the Answer Sheet and the papers used for rough work at the end of the examination.

**Extra time will NOT be allowed to complete the examination under any circumstances.**

**Penalty for cheating or assisting to cheat in national examinations is non-certification.**

**DO NOT TURN OVER THIS PAGE AND DO NOT  
WRITE UNTIL YOU ARE TOLD TO START.**

**PART A: MULTIPLE CHOICE QUESTIONS (QUESTIONS 1 to 20)**

For each question, choose the correct answer and write A or B or C or D in the space provided on the ANSWER SHEET.

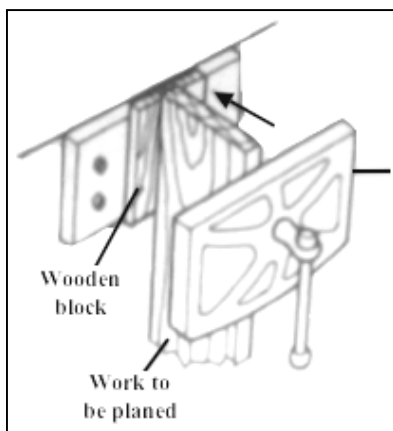
**QUESTION 1**

The floor plan is a horizontal section of a building as viewed from above.

Items shown on a floor plan would include one of the following:

- A. The three elevations  
B. Material list  
C. Footing  
D. Internal room dimensions

For questions 2 and 3, refer to the diagram below.

**QUESTION 2**

The device shown opposite is called \_\_\_\_\_.

- A. Metal work vice  
B. 'G' Cramp  
C. Cramping machine  
D. Woodwork vice

**QUESTION 3**

The wooden block placed between the work to be planed and the jaw of the vice is to prevent

- A. rusting of the metals of the vice.  
B. twisting of the timber.  
C. damaging the surface of work.  
D. cupping of the timber.

**QUESTION 4**

A T-square is used to draw \_\_\_\_\_ lines.

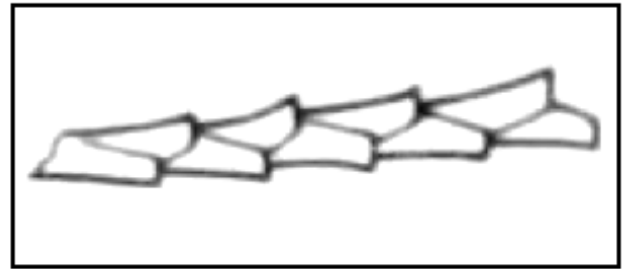
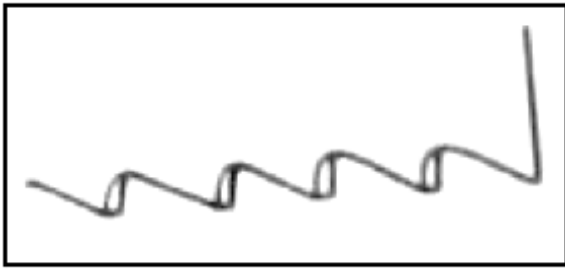
- A. horizontal  
B. projection  
C. hidden  
D. vertical

**QUESTION 5**

A 45° set square will give verticals and lines at

- A. 30° and 45°.  
B. 30° and 135°.  
C. 45° and 135°.  
D. 30° and 145°.

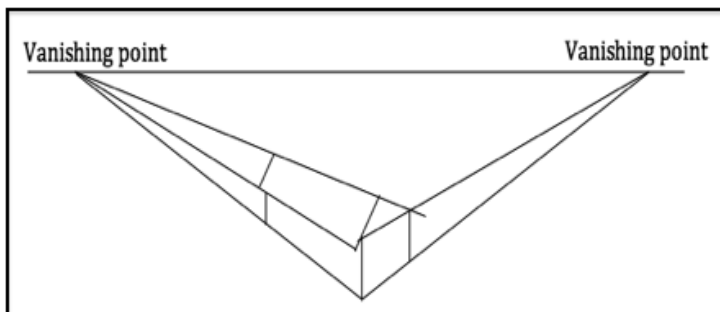
**QUESTION 6**



The diagrams above illustrate the teeth of \_\_\_\_\_ saw.

- A. cross-cut
- B. tenon
- C. rip
- D. hack

**QUESTION 7**



The diagram shown is a/an \_\_\_\_\_.

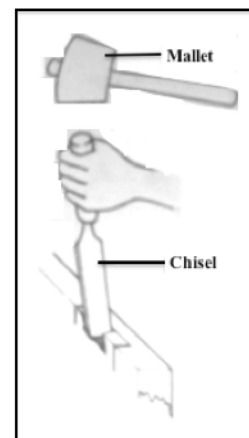
- A. perspective view
- B. orthographic projection
- C. isometric projection
- D. oblique projection

**QUESTION 8**

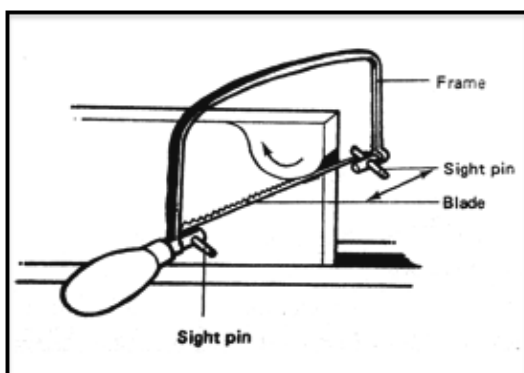
The diagram on the right shows how a wooden mallet is used when chiseling.

The mallet in this diagram is used as a \_\_\_\_\_ tool.

- A. cutting
- B. marking out
- C. percussion
- D. shaping



**QUESTION 9**



The name of the tool shown on the left is \_\_\_\_\_ saw.

- A. cross-cut
- B. rip
- C. hack
- D. coping

**QUESTION 10**

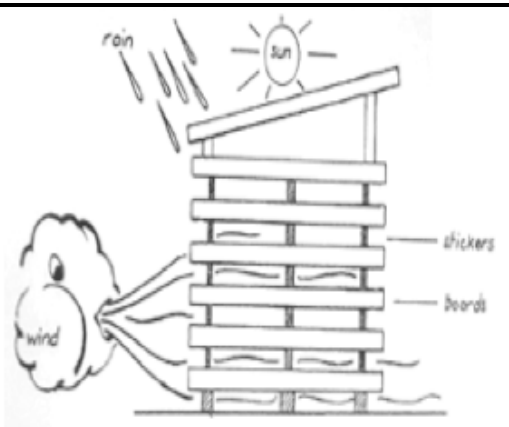
The correct way to plane a timber is to plane \_\_\_\_\_ the grain.

- A. across                      B. with                      C. against                      D. on

For Questions 11 and 12, refer to the information below.

**A Method of Timber Seasoning**

The boards of wood are stacked outside in the open air. They are kept off the ground and have a roof to give protection from the rain and sun. The boards are separated from each other by a number of stickers, all the same size and evenly spaced. The air is able to evenly get in and around each board to dry them. The wood takes from three to six years to dry properly.



**QUESTION 11**

What is the type of timber seasoning shown in the diagram?

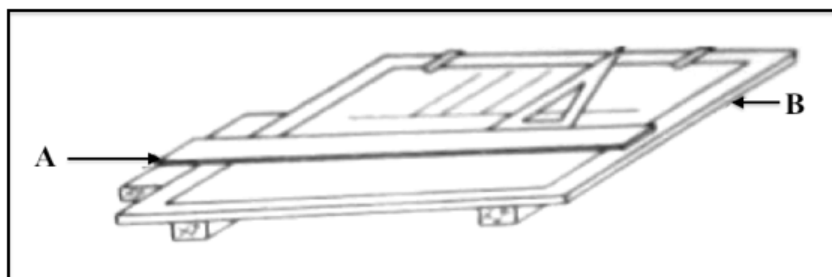
- A. Kiln seasoning      B. Air seasoning      C. Salt impregnation      D. Sun drying

**QUESTION 12**

Timber is seasoned to \_\_\_\_\_.

- A. increase economic value                      B. increase economic value and durability  
 C. mainly to reduce moisture content                      D. increase economic value and reduce defects

For Questions 13 and 14, refer to the diagram below.



**QUESTION 13**

The name of the drawing equipment marked 'B' is called \_\_\_\_\_.

- A. sliding board      B. operation board      C. drawing board      D. chopping board

**QUESTION 14**

The drawing equipment labeled 'A' is used to draw \_\_\_\_\_ lines.

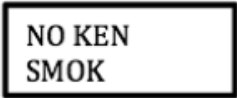
- A. oblique      B. vertical      C. projection      D. straight

**QUESTION 15**

Graphics is a Universal Language.

Which of the following is an example of a Universal Language?

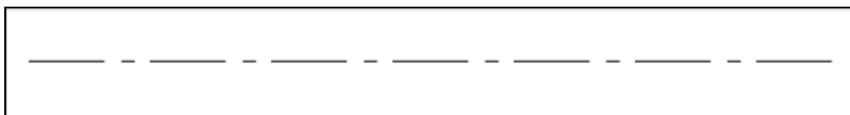
A. English language

B. 

C. 

D. 

For Questions 16 and 17, refer to the line diagram below.

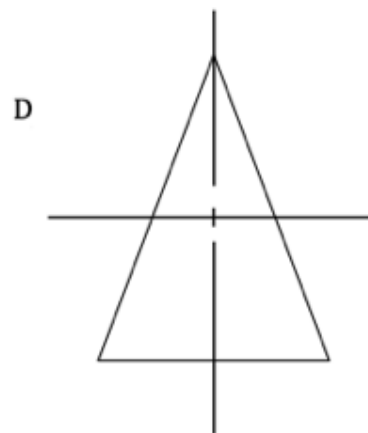
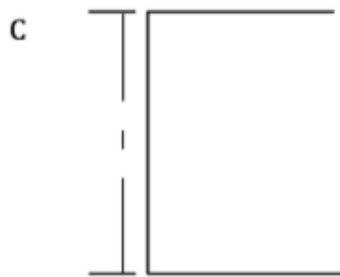
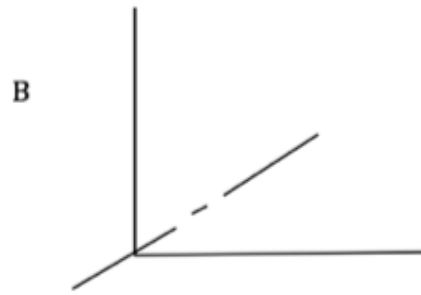
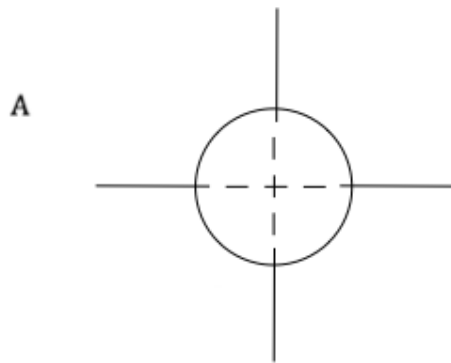
**QUESTION 16**

What is the name of the line shown above?

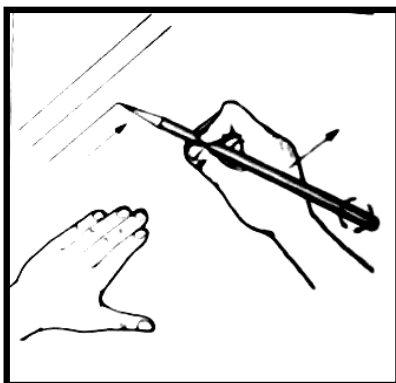
- A. Dimension line      B. Hidden line      C. Centre line      D. Broken line

**QUESTION 17**

Which of the diagrams below shows the use of the line shown above.



**QUESTION 18**



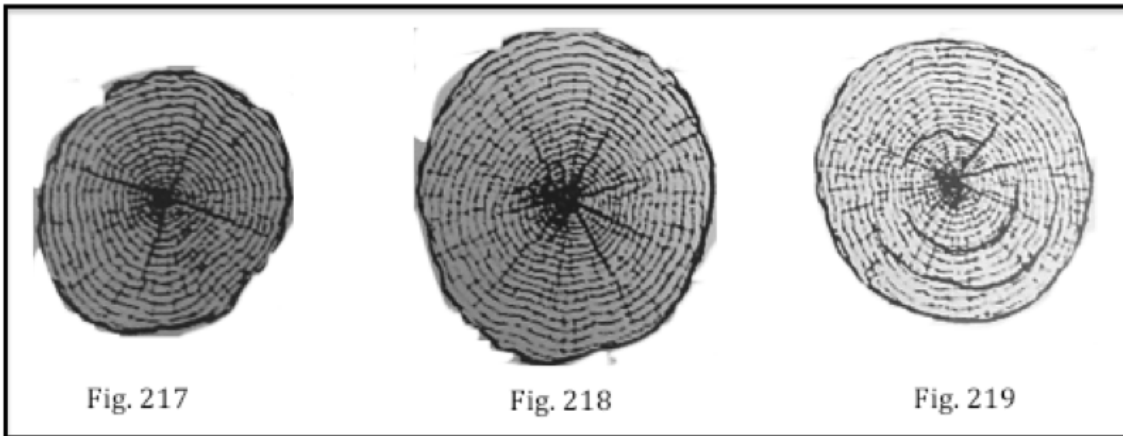
The diagram illustrates \_\_\_\_\_.

- A. how to sketch a diagram using a sharpened pencil
- B. examples of straight lines drawn on a paper
- C. drawing a straight line and maintaining it consistently right through
- D. oblique lines drawn with a sharpened pencil

For Questions 19 and 20, refer to the information below.

### Timber Defects

The principal natural defects in timber, caused by vicissitudes of climate, soil, etc, are: - "Heartshakes": splits or clefts in the centre of the tree; common in nearly every kind of timber; in some cases hardly visible, in others extending almost across the tree, dividing it into segments; one cleft right across the tree does not occasion much waste as it divides the squared trunk into 2 substantial balks; 2 clefts crossing one another at right angles as in Fig 217, make it impossible to obtain scantlings larger than  $\frac{1}{4}$  the area of the tree: the worst form of heartshake is when the splits twist in the length of the tree, thus preventing its conversion into small planks. "Starshakes": in which several splits radiate from the centre of the timber, as in Fig.218; "Cupshakes", curved splits separating the whole or part of one annual ring from another (Fig. 219): when they occupy only a small portion of a ring they do no great harm. "Rind-galls": peculiar curved swellings, caused generally by the growth of layers over the wound remaining after a branch has been imperfectly cut off.



### QUESTION 19

The timber defects shown in the diagrams above occur \_\_\_\_\_.

- |                                |                     |
|--------------------------------|---------------------|
| A. after seasoning             | B. during seasoning |
| C. during the growth of a tree | D. after felling    |

### QUESTION 20

Several splits starting from the center of the timber are

- |                  |                |                 |           |
|------------------|----------------|-----------------|-----------|
| A. heart shakes. | B. ring-galls. | C. star shakes. | D. knots. |
|------------------|----------------|-----------------|-----------|

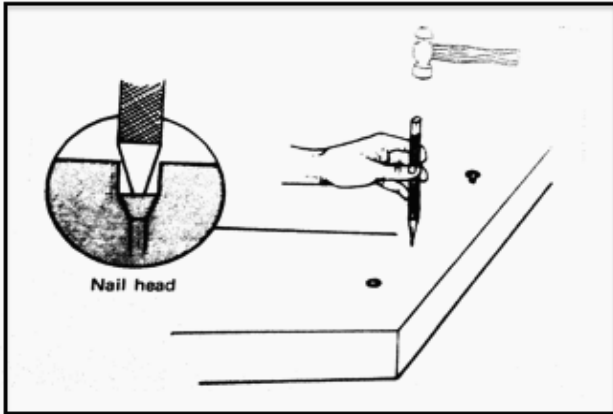
**PART B: SHORT ANSWER**

**(QUESTION 21 to 35)**

**15 Marks**

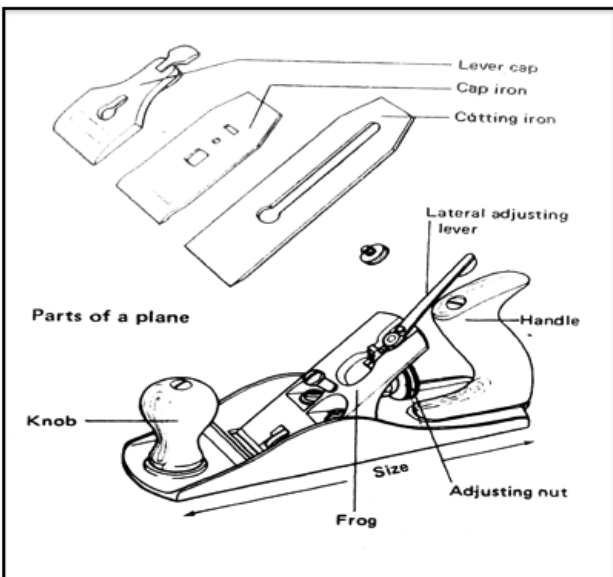
For Questions 21 to 35, work out the answer for each question and write the answer in the space provided on the ANSWER SHEET.

**QUESTION 21**



What tool is used with a hammer to drive a nail head below the surface of a timber?

For Questions 22 and 23, refer to the information below.



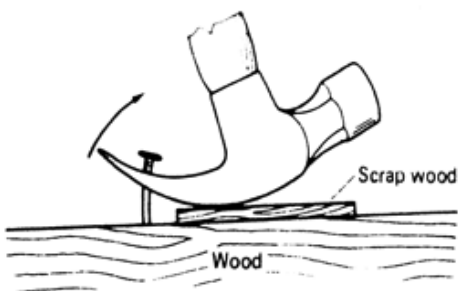
**QUESTION 22**

Name the part that is used to regulate the cutting iron or blade to give the right amount of blade exposure.

**QUESTION 23**

If you want to adjust the blade to the left or right you would use the \_\_\_\_\_ to do this.

**QUESTION 24**

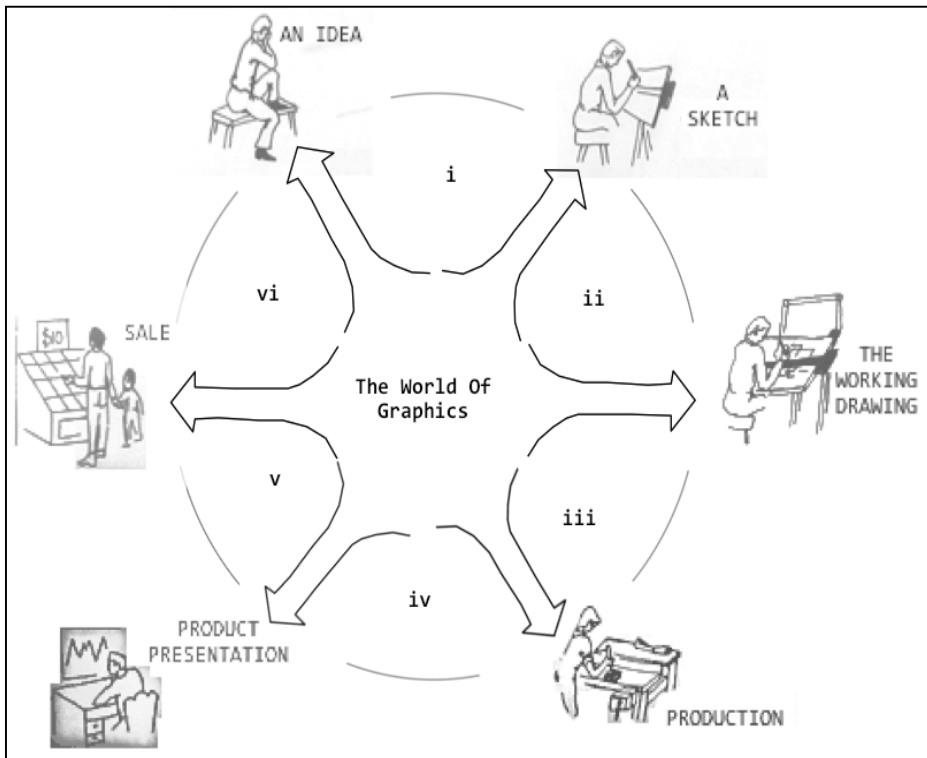


A claw hammer in use

What is the name of the part doing the work as shown by the arrow?



For Questions 25 and 26, refer to the diagram below on the design process. Study and analyse the diagram carefully and answer the questions.



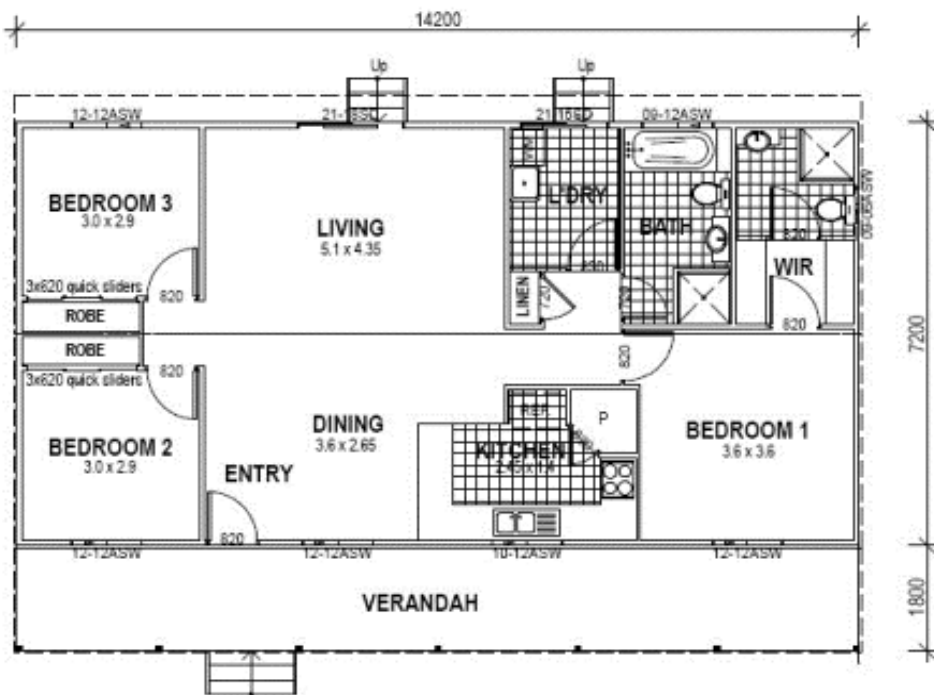
**QUESTION 25**

Who uses a sketch to produce a working drawing?

**QUESTION 26**

What happens at stage V?

For Questions 27, 28 and 29, refer to the diagram below.



**QUESTION 27**

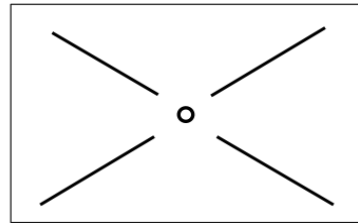
What is the total width of the house?

**QUESTION 28**

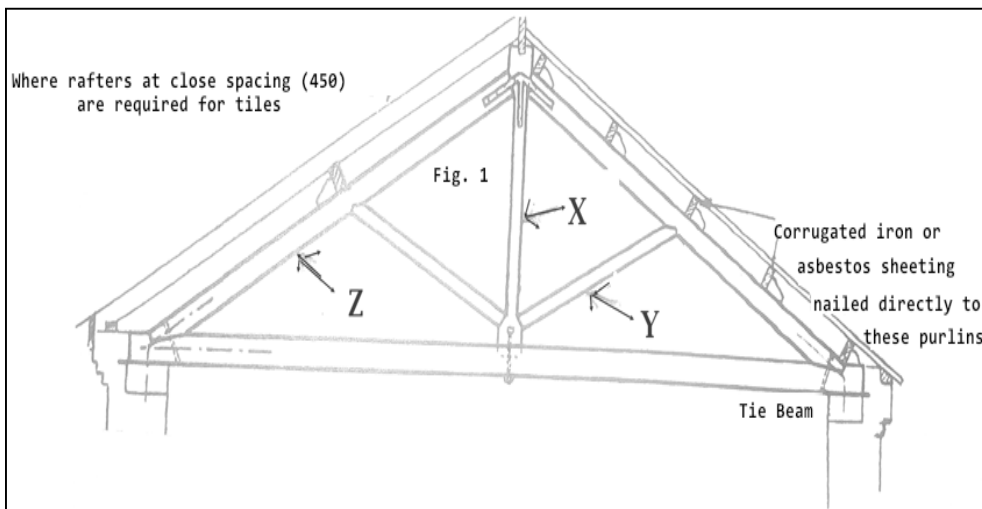
What is the total number of doors shown on the floor plan?

**QUESTION 29**

What does the following symbol represent on the floor plan?



For Questions 30, 31 and 32, refer to the diagram below.



**QUESTION 30**

Name the part labelled **X** on the diagram.

**QUESTION 31**

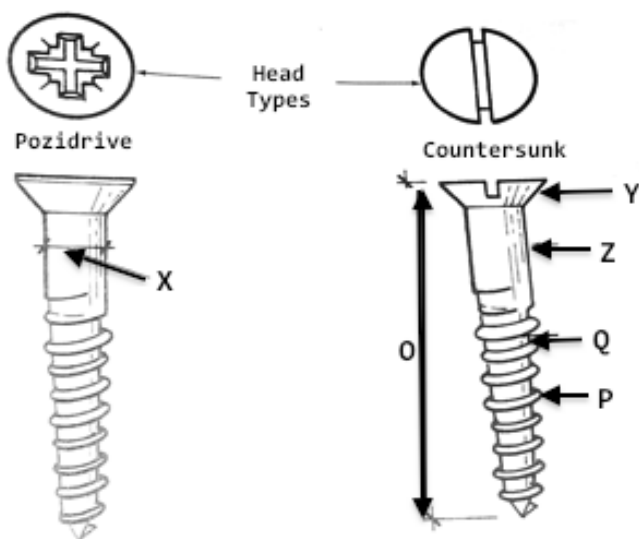
What is the common name for the part labelled **Z**?

**QUESTION 32**

The roof will collapse if termites destroy constructional members **X** and \_\_\_\_\_.

Write only the letters **Y** or **Z** as your answer.

For Questions 33 and 34, refer to the diagram below.



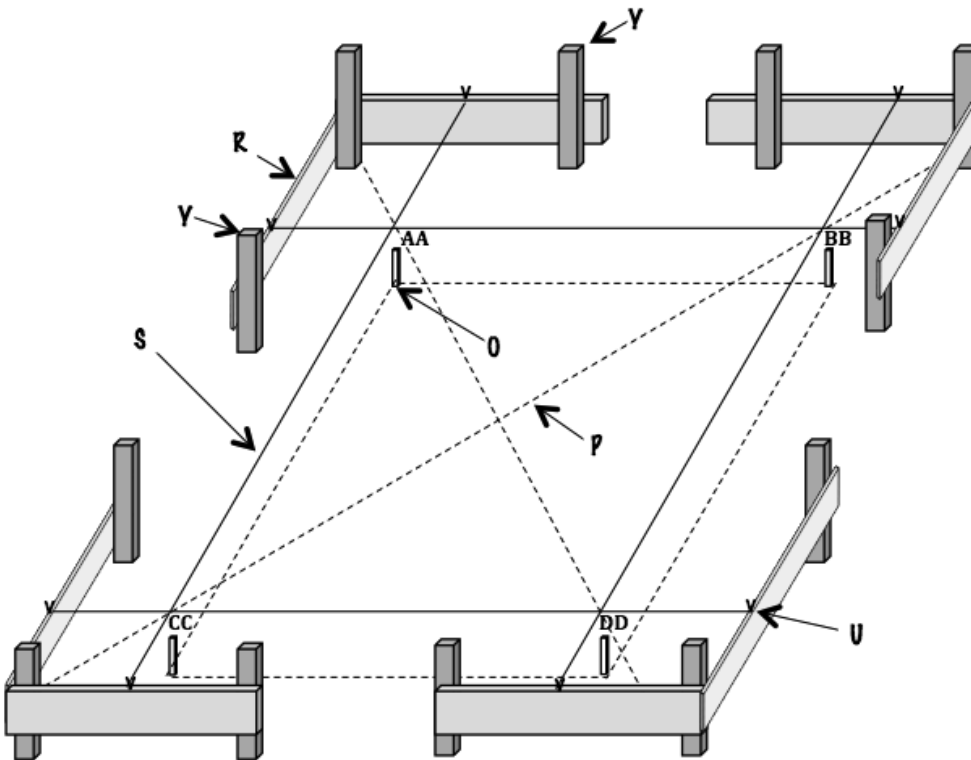
**QUESTION 33**

The part of the screw labelled **Z** is called \_\_\_\_\_.

**QUESTION 34**

The part labelled **P** is called \_\_\_\_\_.

**QUESTION 35**



Line **AA-DD** must be \_\_\_\_\_ to line **BB-CC**.

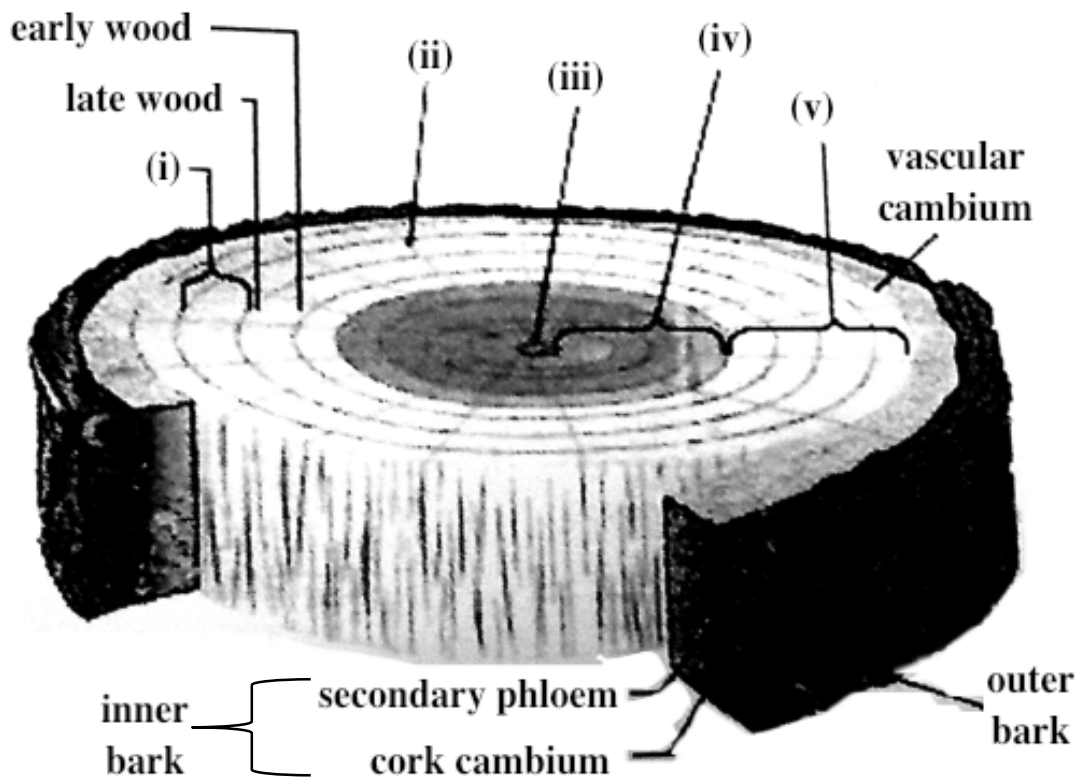
**PART C: EXTENDED RESPONSE (Question 36)**

For Question 36, work out the answer for the question and write the answer in the space provided on the answer sheet.

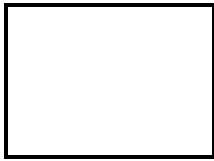
**QUESTION 36**

Study the cross section of a log below and name the five parts indicated by the arrows using the list of words provided below.

cambium layer	heartwood	sapwood	pith	growth rings	medullary rays
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**END OF EXAMINATION**



MARKER 1

**PRACTICAL SKILLS - ANSWER SHEET**

YEAR		PROV.		SCHOOL			CAND No.		
1	5								
NAME									
SCHOOL									

**PART A:** (Questions 1 to 20)

Write the letter of your answer next to each question number below.

1	
2	
3	
4	
5	

6	
7	
8	
9	
10	

11	
12	
13	
14	
15	

16	
17	
18	
19	
20	

**PART B** (Questions 21 to 35)

Write your answer next to each question number below.

21	
22	
23	
24	
25	

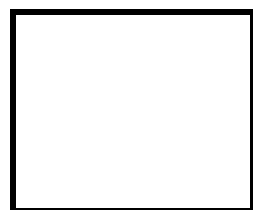
26	
27	metres
28	
29	
30	

31	
32	
33	
34	
35	

**PART C** (Question 36)

Write your answer next to each question number below.

36	(i)	
	(ii)	
	(iii)	
	(iv)	
	(v)	



MARKER 2

**DO NOT WRITE ON THIS PAGE**

**YOU MAY DO YOUR ROUGH WORK ON THIS PAGE**

**CAREFULLY TEAR ALONG THIS PERFORATION**

**YOU MAY DO YOUR ROUGH WORK ON THIS PAGE**