

LABASA SANGAM (SKM) COLLEGE

LESSON NOTES

Year/Level: 10

Subject: BASIC TECHNOLOGY

Week: 1

Strand	Joints & Processes
Sub Strand	Classification of Wood Working Joints
Content Learning Outcome	Determine different types of classification of Wood Working Joints and its application

Stiffness and strength of structural furniture elements related to and furniture itself depends mainly on the material properties joining (element dimensions, material type, etc..), the type mechanical connectors and the way of its shoulder application. It is often found in furniture construction single shear steel-to-timber joints, they represent the connection fittings, such as allowing the movement of furniture parts with screws.

What are Wood Joints?

A joint is having one piece of wood placed on another and fastened with either glue, nails, screws or staples. Wood joints vary in strength and application which need a lot of skills and knowledge to construct.

Classification of Wood Working Joints

In this topic you are going to learn only three different types of joints from the three groups, and it will help when doing your practical.

Joints are classified into three main groups namely:

- i. Widening Joints
- ii. Angle Joints
- iii. Framing Joints

On any joints construction, steps are taken after the normal procedure of **timber preparation** through **F.E.W.T.E.L.**

Step 1 - Marking of the Joints - Marking knife is useful as it cut the fibres of the wood across the timber to avoid splitting when cutting with the tenon saw

Step 2 - Cutting of the Joints- The **tenon saw** and **dovetail saw** are used for general and fine cutting of the joints. A **ratchet brace** fitted with a boring bit is used to bore out wastes from the mortise or bore holes for the dowel joints.

Step 3 - Trial Assembly & Final Assembly - This is done after cleaning out the joints using some of the tools mentioned above to check whether the joints are aligned and squared to the face or edge of the timber. Once you are satisfied then prepare all the materials and tools for final assembly

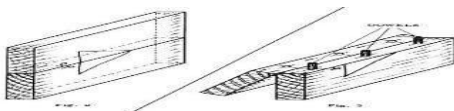
Step 4 - Cleaning of the Joints- Exposed nails are to be punched or screws to be driven below the surface of the timber to avoid damage to the cutting iron of a smoothing plane or chisel.

Step 5 - Final Finishing - Apply the sanding sealer, leave it to dry for some time and apply light pressure to the used garnet paper when papering the joints before the final coat of varnish or stain.

Widening Joints are used to produce wide boards by gluing a number of narrow boards joining it from edge to edge.

a. Butt Edged Joint

The two edges are planned square and straight and glue is applied to the squared edges before the two pieces are cramped together.



b. Dowel Widening Joint

Dowels are added to the edges of the board. Similar to butt joint but more strength is added when dowels are used. Both edges of the board are drilled with holes of less than 3 mm in diameter for tight fitted joints. Glue are added to both the dowels and holes before joining. Make sure to wipe off the surplus glue after cramping, with a damp piece of cloth.

How to test for flatness and straightness of the two pieces:



Dowels are made as explained in the section on securing joints. Mark out the position of the dowels by putting the boards on top of each other, sides together and marking both edges at the same time. The centre can be marked with a marking gauge, marking from the face side.

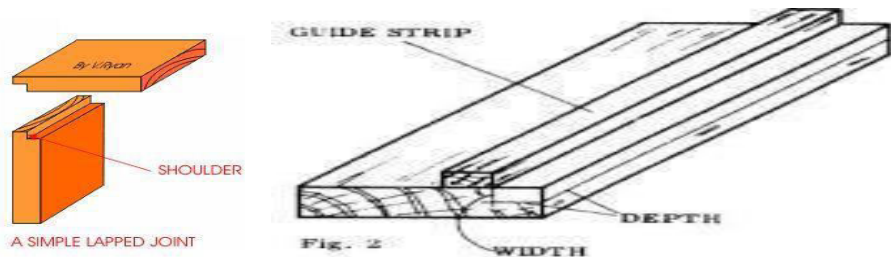
c. Rebated Butt Joint

This joint consists of rebating both pieces which gives extra gluing surfaces before cramping.

Step 1 Mark the depth and width of the rebate with a marking gauge.

Step 2 Fix a wooden guide strip along the line that marks the width of the rebate

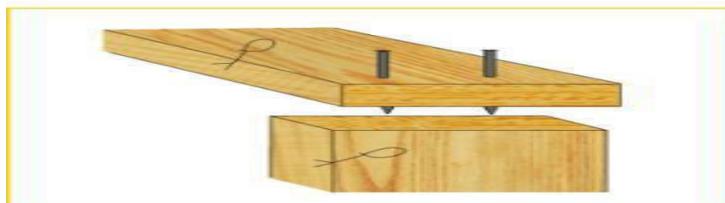
Step 3 Plane until you reach the line marking the depth of the rebate. Take care that the side of the plane is always against the guide strip, so that the width of the rebate is the same along the whole length.



ANGLE or Box Joints

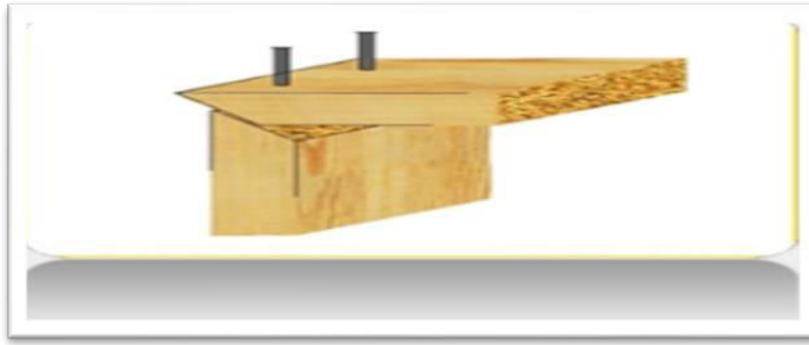
Used in box-like construction such as cabinets, boxes, drawers, etc.

- i. **Simple Butt Joint**- Woods are butted face to edge and nailed or screwed or dowelled together which is also known as dowel joints.



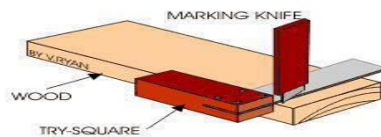
ii. **Mitre Joints**

The two pieces are cut at 45° angle in a mitre box so that they will form a 90° when joined.

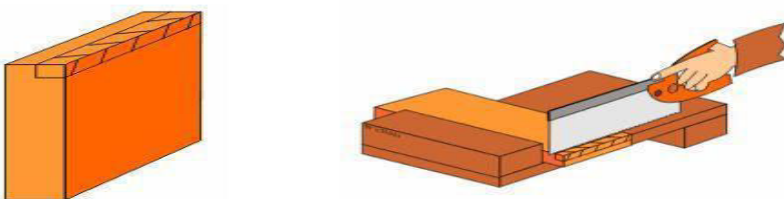


iii. **Rebated Butt Joints**

Marking of the joints- The marking gauge is being set to half thickness of the timber Using the marking knife, square the edge of the timber using a try square.



Using the tenon saw, cut out the wastes of both pieces of the rebates with the timber firmly onto the bench supported with a bench hook.

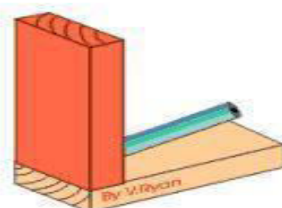


Clean the rebates with a bevel edged firmer chisel before joining the two pieces together

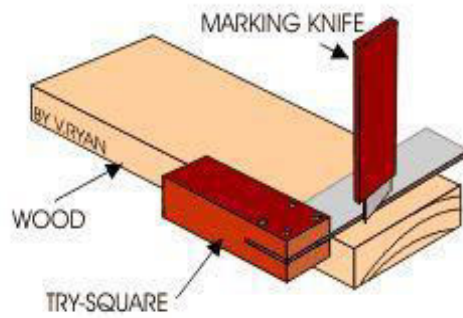
Common Dovetail Joints

Dovetail joints are very strong due to the tails and pins which are shaped which makes it difficult to be pulled apart when glued. It is used in box construction such as drawers, cabinets and other pieces of furniture where strength is required.

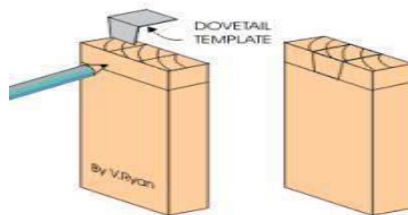
The two sides are arranged and a pencil is used to mark the thickness of the material.



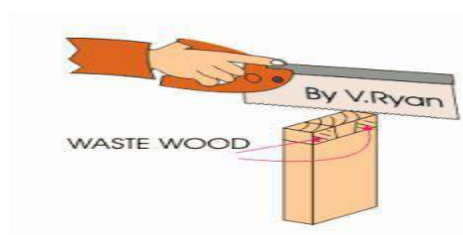
A marking knife and a try square are used to mark around the two pieces of timber.



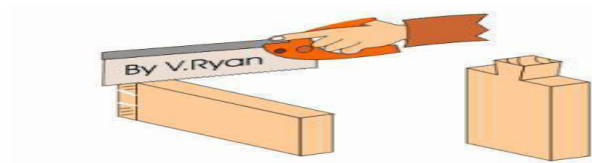
Using the sliding bevel, adjust the angle of the dovetail with a standard ratio of 1 : 6 or using the dovetail template to mark the dovetail.



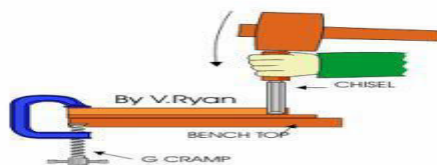
Placed wood in the vice. Use dovetail saw and cut straight down to the line.



Turn wood sideways in a vice and cut the waste.



Cramp the piece of timber onto the bench top using a G-cramp. Use a firmer or bevel edged chisel to pare out the waste.



Then trial and final assembly.

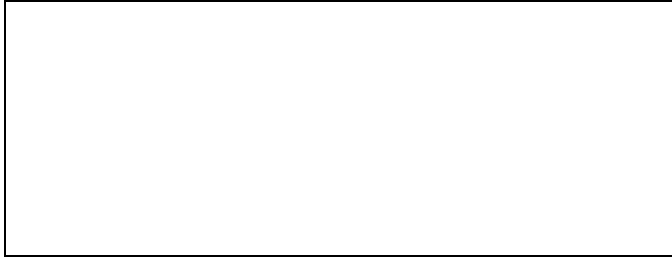
HOME STUDY PACKAGE

School: Labasa Sangam (SKM) College
Subject: Basic Technology
Worksheet Number 1/Week 1

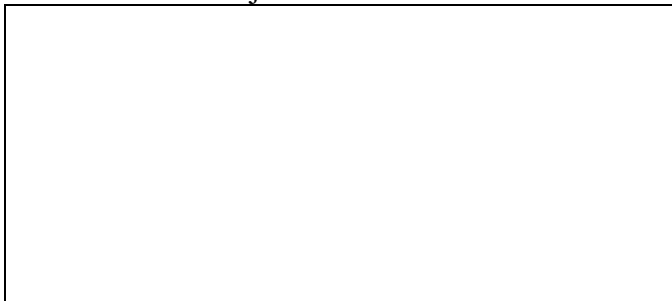
Year/Level: 10
Student Name: _____
Due Date: 26th July 2021

1. Make a freehand sketch of the following joints:

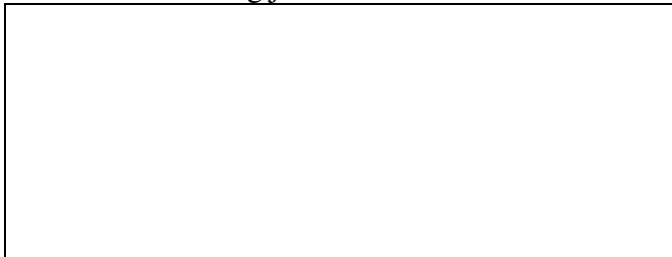
i. Simple Butt Joint



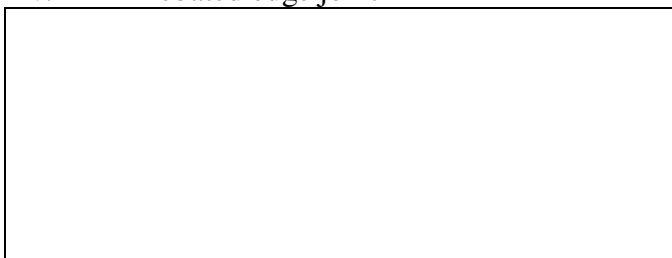
ii. Rebated joint



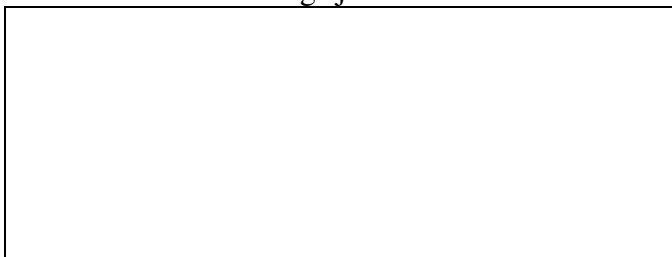
iii. Widening joints



iv. Rebated edge joint

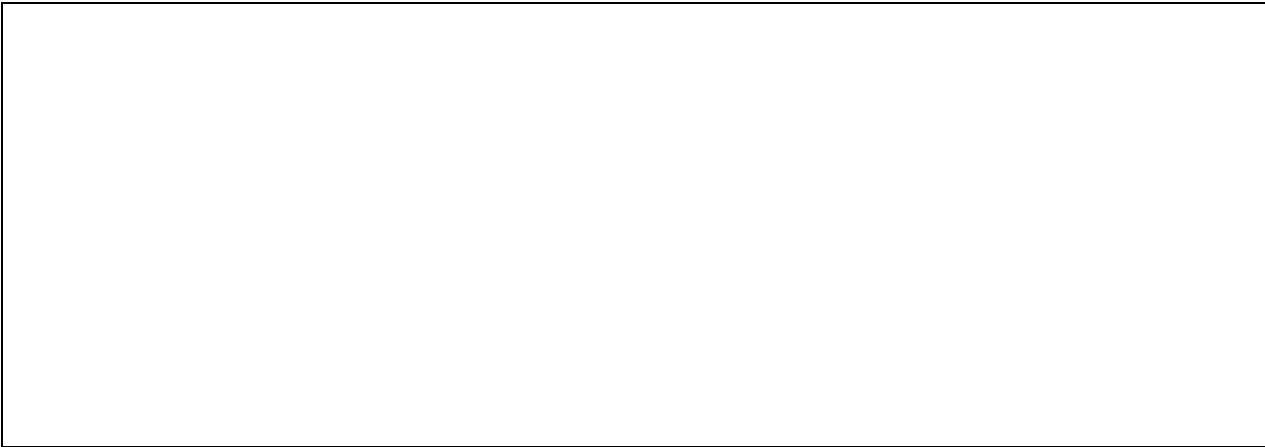


v. Dowelled edge joint





ii. Draw their exploded view of Dowell widening joint and state **1** use of the joints.



Use-

: _____

LESSON NOTES 1

School : Labasa Sangam [SKM] College

Year 10 Level

Subject: English

Strand	WRITING AND SHAPING
Sub Strand	3.1 TEXT TYPES MEDIA TEXT, EVERYDAY COMMUNICATION & LITERARY TEXT.
Content Learning Outcome	EN 10.3.1.1 :Show understanding of the purpose of writing by engaging in effective and purposeful writing activities

TOPIC: PERSONAL WRITING

Narrative Essay Writing

- **Purpose** - to tell a simple story.
- **Structure** - The story is organised in chronological order.
 - **Introduction** - describes the setting (where, when), introduces the characters (who), explains the situation or introduces the problem.
 - **Body paragraphs** (3-4) - focuses on events : Your story needs to build to something exciting, the climax which includes action, dialogue, sensory details, thoughts & feelings and suspense.
 - **Concluding paragraph** - end your essay with a memorable line and also reveal how you overcame your problem. All conflicts are resolved and everything goes back to normal.
- **Transitions** - Essays require appropriate connectives and linking devices to move them along smoothly, e.g. Suddenly, next, then, as soon as, before, silently etc.
- **Viewpoint** - Often written in 1st person – I or we.
- Can also be written in 3rd person – he, she, they.

Plot Components The sequence of events in a narrative essay.

Exposition/Introduction – beginning of the plot which provides important background information and introduces the setting, characters and main conflict (problem)

Rising Action - this part of the story begins to develop the conflict. A building of interest or suspense occurs. During the rising action, the conflict becomes more intense and suspense builds as the main characters struggle to resolve their problem.

Climax - is the turning point in the plot when the outcome of the conflict becomes clear, usually resulting in a change in the characters or a solution to the conflict. Usually the main character comes face to face with the conflict.

Falling Action - the conflict is - or about to be – settled

Resolution: the ending - The story's central problem is finally solved and the story comes to an ending.

SAMPLE ACTIVITY QUESTION

Narrative Essay

(10 Marks)

Use 140 to 150 words and give your writing a title. Include all the necessary features of Narrative essay writing. Write a plan for your choice before you start writing. The theme for this question is: **Obedience**.

Write a narrative essay including the sentence below in any part of your writing.

“.....to obey all the rules for keeping his family safe.....”

STEPS TO FOLLOW WHEN PLANNING A NARRATIVE ESSAY

STEP 1

Study the Activity question to understand the instructions given for writing a narrative essay. See the Sample activity question given above.

Thus, consider planning the plot of one incident only that involves the main character [Subject] of the story.

STEP 2

Take note of the **Theme** given instruction. For example :The theme for this question is: **Obedience**.

Thus, the narrative planned should emphasize the importance of obedience or highlight the consequence of disobedience.

STEP 3

From the main question given, identify the **Subject** [who] the narrative is about. For e.g Write a narrative essay including the sentence below in any part of your writing.

“.....to obey all the rules for keeping **his** family safe.....”

Subject identified is **his** = a man / boy

Thus, a name for the main character should be planned and used in the narrative essay.

STEP 4

Identify other important details from the question that can give a clue on what to write about.

E.g. “.....to obey all the **rules for keeping his family safe**.....”

STEP 5 - Compose a brief/summarized plan based on the clues identified using a simple plan structure.

SAMPLE PLAN

Theme: - Obedience

Title: - The Unexpected Cost of Disobedience

Setting: - Waitui Housing, Labasa.

Characters: - Pita (Main), family members, Pita’s friends, Health officials.

Plot:

Beginning - Pita disregard Dr Fong’s advice by inviting his friends to his home every afternoon after work.

Middle - Through sharing during grog sessions with the friends, Pita spreads a deadly virus to his family members.

Climax - Pita and all his family members unexpectedly fall sick and are rushed to hospital where his only son fail to survive.

End - Pita and all his family members are isolated & vaccinated. Pita vowed to obey all the rules for keeping his family safe from the deadly Corona virus.

YEAR 10
MATHEMATICS
LESSON NOTES

Week 1

STRAND 4: GEOMETRY

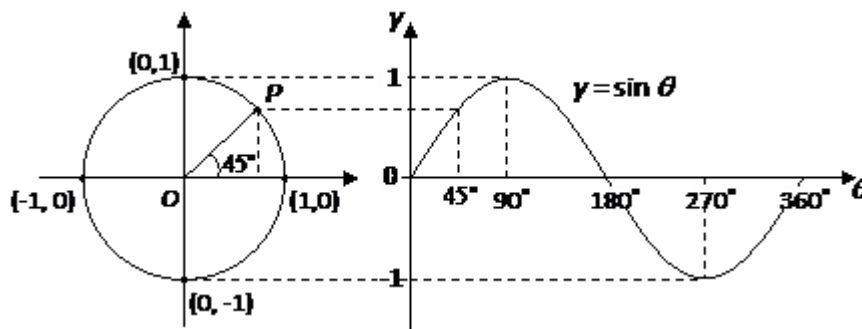
SUB – STRAND: TRIGONOMETRIC FUNCTIONS

OBJECTIVE

- *Sketch the trigonometric graphs.*
- *Identify the graphs of sine, cosine and tangent*

Sine Graph

- **$y = \sin \theta$ is known as the sine function.**
- Using the unit circle, we can plot the values of y against the corresponding values of θ .
- The graph of $y = \sin \theta$, for $0^\circ \leq \theta \leq 360^\circ$ obtained is as shown:

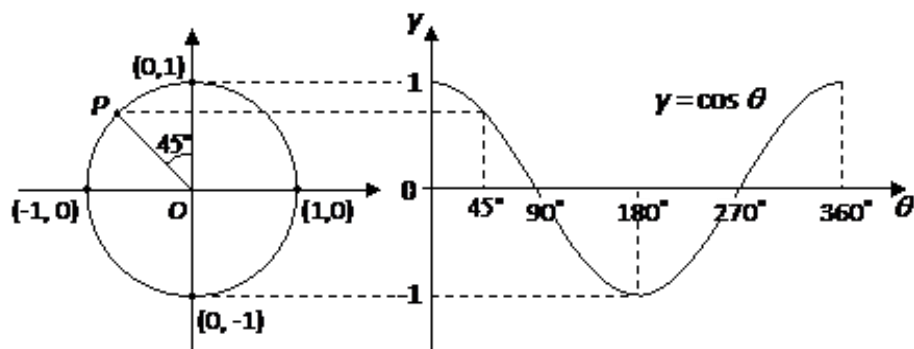


Properties of Sine function

- The sine function forms a wave that starts from the origin
- $\sin \theta = 0$ when $\theta = 0^\circ, 180^\circ, 360^\circ$.
- Maximum value of $\sin \theta$ is 1 when $\theta = 90^\circ$. Minimum value of $\sin \theta$ is -1 when $\theta = 270^\circ$. So, the range of values of $\sin \theta$ is $-1 \leq \sin \theta \leq 1$.

Cosine Graph

- $y = \cos \theta$ is known as the cosine function.
- Using the unit circle, the values of y against the corresponding values of θ can be plotted.
- The graph of $y = \cos \theta$, for $0^\circ \leq \theta \leq 360^\circ$ obtained is as shown:

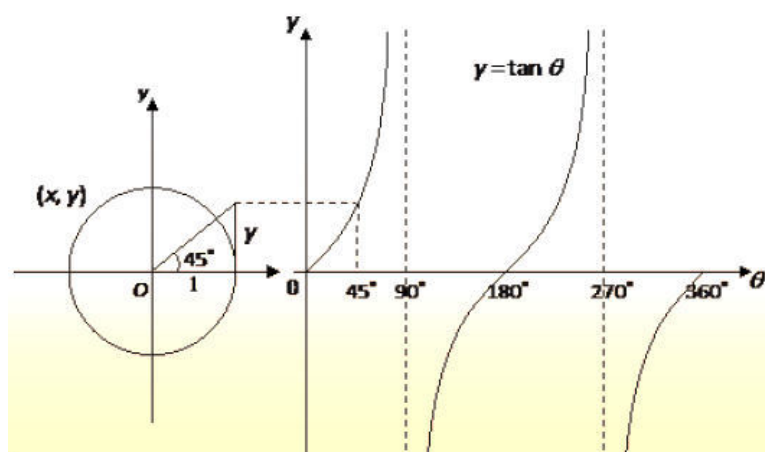


Properties of Cosine function

- The cosine function forms a wave that starts from the point $(0, 1)$
- $\cos \theta = 0$ when $\theta = 90^\circ, 270^\circ$.
- Maximum value of $\cos \theta$ is 1 when $\theta = 0^\circ, 360^\circ$. Minimum value of $\cos \theta$ is -1 when $\theta = 180^\circ$. So, the range of values of $\cos \theta$ is $-1 \leq \cos \theta \leq 1$.

Tangent Graph

- $y = \tan \theta$ is known as the tangent function.
- Using the unit circle, values of y against the corresponding values of θ can be plotted.
- The graph of $y = \tan \theta$, for $0^\circ \leq \theta \leq 360^\circ$ obtained is as shown:



Properties of Tangent function

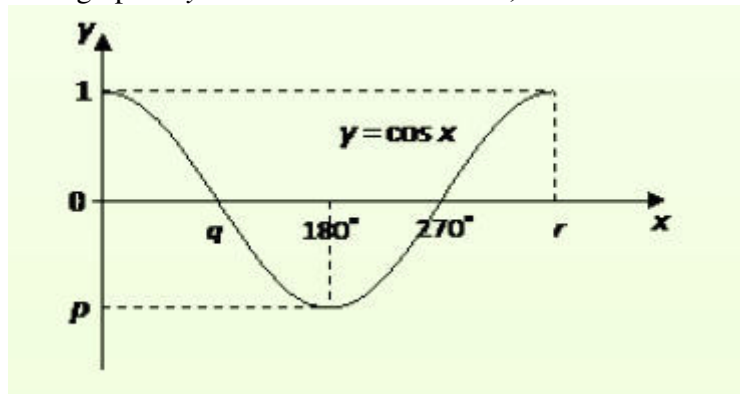
- The curve is not continuous. It breaks at $\theta = 90^\circ$ and 270° , where the function is undefined.
- $\tan \theta = 0$ when $\theta = 0^\circ, 180^\circ, 360^\circ$. $\tan \theta = 1$ when $\theta = 45^\circ$ and 225° and $\tan \theta = -1$ when $\theta = 135^\circ$ and 315° .
- $\tan \theta$ does not have any maximum or minimum values. The range of values of $\tan \theta$ is $-\infty < \tan \theta < \infty$

Week 1 ACTIVITY

STRAND 4: GEOMETRY

SUB – STRAND: TRIGONOMETRIC FUNCTIONS

1. The diagram shows a graph of $y = \cos x$ for $0^\circ \leq x \leq 360^\circ$, determine the values of p , q and r .

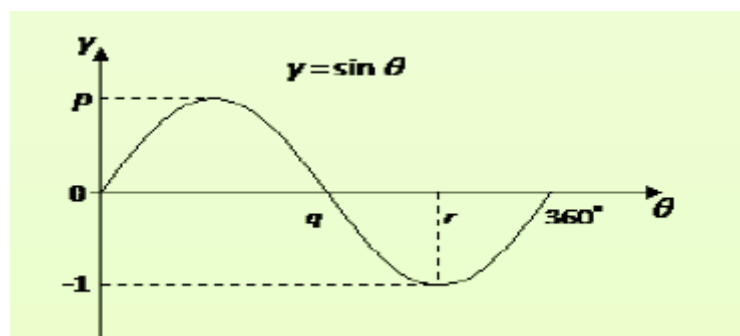


p - _____

q - _____

r - _____

2. The diagram shows a graph of $y = \sin x$ for $0^\circ \leq x \leq 360^\circ$, determine the values of p , q and r .



p - _____

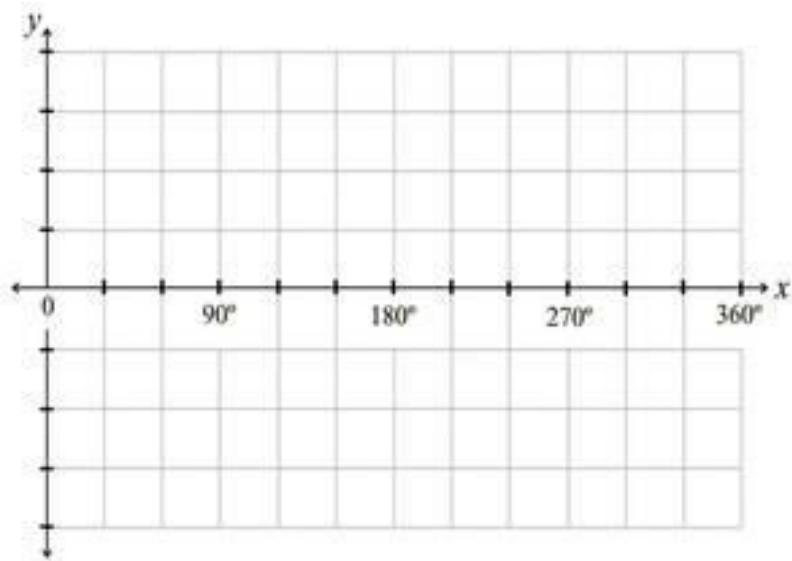
q - _____

r - _____

3. Sketch the graph of $y = \cos x$ for $0^\circ \leq x \leq 360^\circ$, by setting up a table of values.

x	0	45	90	135	180	225	270	315	360
$\cos x$									

Graph of $y = \cos x$



Home Study Package					
SCHOOL	Labasa Sangam (Skm) College	YEAR:	10	SUBJECT:	SOCIAL SCIENCE

**Topic: Social Organisation And Processes
Government And Democracy
WORKSHEET: 1**

(Read the notes on Government and Democracy and answer the following questions)

Multiple Choice Circle the best answer

1. A free market government is also known as a _____ government.

A. Colonial	C. Capitalist
B. Oligarchy	D. Revolutionary

2. An elected president is the head of a/an _____ government.

A. Emirate	C. Totalitarian
B. Republic	D. Communist

3. Anne was not happy with the judgement from the High Court. The next court where she can refer her case to is the

A. Family Court	C. Supreme Court
B. Court of Appeal	D. Magistrate Court

4. The Constitution of the Republic of Fiji, 2013, introduced a new electoral system for Fiji known as the

A. Mixed System	C. Plurality System
B. Majority Systems	D. Proportional Representation Systems

5. The phrase Universal Suffrage means

A. secret ballot	C. one person, one vote
B. equal right to vote	D. free and fair elections

6. The executive power in Fiji is exercised by the

A. president	C. government
B. opposition	D. military commander

Labasa Sangam College

Year 10D Vosa Vakaviti

Week 1 Worksheet

Yacamu: _____

NA VAKADEWATAKI NI TALANOA KEI NA BULA VAKAITAUKEI E VITI

Vola: Suliasi kei Inoke Tamanalevu

Taro 1:

Vakadikeva na qaqa ni serekali e volai koto e ra mo sauma kina na veitaro e soli:

Era sa liu sara na wekada
Ena vuli, vakaduri bisini kei na cakacaka
I taukei e se yabe toka vakamalua
Ni kaya toka **ki Namuka vata ga nikua.**

E da kaya ni levu tu na qele
Me na tei kina na noda were
Qai dau veivakaleqai na levu ni wele
Vakavuna wale me sega na sede

1. Na cava na ulutaga ni serekali oqo kei na yacana ko koya e vola?
2. Na cava na inaki ni volai ni serekali oqo?
3. Vakamacalataka e rua na iwalewale ni vola serekali e Vakayagataki kei na kena i vakaraitaki.
4. Na cava na vuna e volai koto e na iqi kata e na i matai ni qaqa ni serekali?
5. Mai na rua na qaqa ni serekali ko wilika ‘qo, na cava na ivakavuvuli ko vulica mai kina?