NAME: _____

YEAR: _____

LABASA SANGAM (SKM) COLLEGE

HOME STUDY PACKAGE

YEAR 11 APPLIED MATHEMATICS

WORKSHEET 1

Instructions:

- Write the answers in the space provided.
- **File the lesson notes.**
- Return the ***worksheet only***

Week 13 Activity

STRAND 6: TRIGONOMETRY

SUB STRAND: TRIGONOMETRIC GRAPHS

1.   A trigonometric graph has the equation *y* = 3 cos 2θ

   a)   State the amplitude of this graph.   (1 mark)

   b)   What is the period of this graph?   (1 mark)

   c)   Sketch the graph for $0^0 \leq \theta \leq 360^0$ (2 marks)

2.	Sketch the graph of the function y = − 2 sin 2θ for $0^0 \leq \theta \leq 360^0$	(2 marks)

3.	Solve the following trigonometric equations:

a)	2 sin x = 1	(2 marks)

b)	2 − cos ϴ = 1	(2 marks)

LABASA SANGAM (SKM) COLLEGE

HOME STUDY PACKAGE

YEAR 11 APPLIED MATHEMATICS

WORKSHEET 2

Instructions:

- Write the answers in the space provided.
- **File the lesson notes.**
- Return the ***worksheet only***

Week 14 & 15 ACTIVITY

STRAND 7: STATISTICS

SUB STRAND: ANALYSIS AND INTERPRETATIO OF STATISTICAL DATA

1.   Seven students sat for a test. Their scores were 100, 50, 45, 40, 80, 75, 45

Find

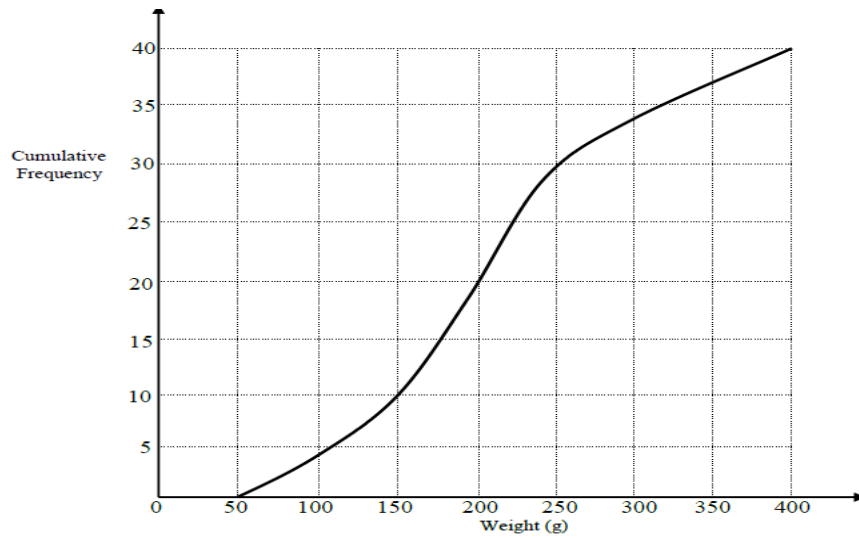a)   mean   (1 mark)

b)   median   (2 marks)

c)   mode   (1 mark)

d)   range   (1 mark)

2. A sample of pebbles was collected from a beach and their weights were recorded. The cumulative frequency graph given below shows the results.


Use the graph to find:

a)   median   (1 mark)

b)   inter –quartile range   (2 marks)

c)   number of pebbles that weigh more than 150 g.   (2 marks)

4

NAME:
YEAR 11:

YEAR 11 MATHEMATICS LIFE SKILLS

WORKSHEET 1 (WEEK 13)

Strand 4: Trigonometry in Everyday Context

10
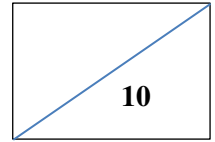
Note: Refer to the lesson notes of week 13-15.

1) A builder laying the foundations of a garage wants to be sure he has the walls of the garage are at right angles. The length of the garage is 6m and the width is 5m.

```
        6m
┌──────────────┐
│              │ 5m
└──────────────┘
```
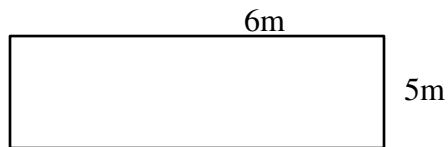
Explain how measuring the length will check that the walls of the garage meet at right angles.

(2 marks)

2. A 5m ladder is leaning against a wall. The foot of the ladder is 3 m from the base of the wall.
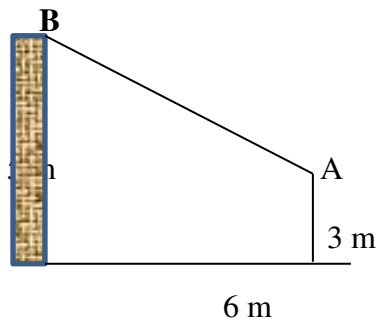
ladder   Wall
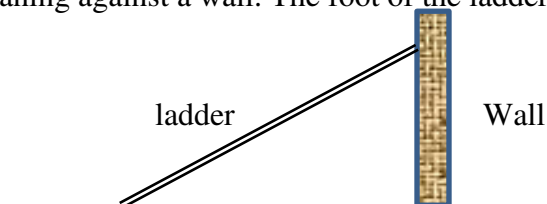
How far up the wall does the ladder reach?

(2 marks)

3. In the diagram AB is the sloping roof of a shed. Point A is 3m high, B is 5 m high. The width   of the shed is 6 m

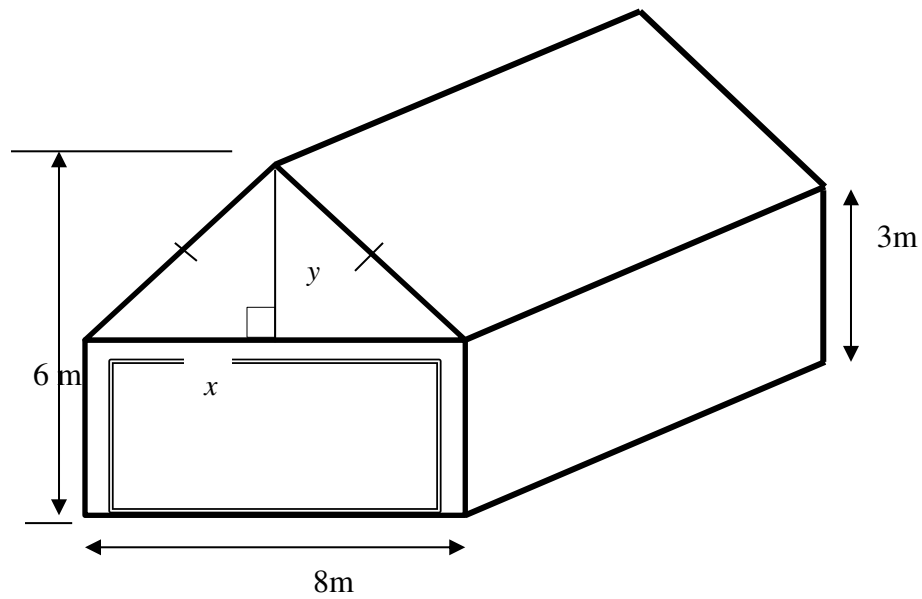Find AB, the length of roofing iron needed for the roof.

B

A

3 m

6 m

(2 marks)

4. A rectangular football field measures 56m by 100m. Calculate the distance across the field from   one   corner to the corner diagonally opposite.

(1 mark)

5. The following is a building sketch of a garage

a) Find the value of x.

(1 mark)

b) Find the value of y.

(1 mark)

c) Find the value of z using Pythagoras Theorem.

(1 mark)

LABASA SANGAM (SKM) COLLEGE

HOMESTUDY PACKAGE 5

WORKSHEET NO: 1   **STUDENTS NAME:_____**

SUBJECT: ACCOUNTING   **YEAR 11_____**

DUE DATE: 18/10/2021

Total marks: 10   **Weighting: 5%**

Instructions :

I.   Write the answers in the space provided at the back of this page.

II.   File the lesson notes.

III.   Return the **_worksheets only_** on the due date as stated above.

WEEK 13

1. Explain the purpose of each of the following;
a) Gross profit ratio

_____

_____

_____

b) Mark up ratio

_____

_____

_____

c) Debt to equity ratio

_____

_____

_____

d) Debtors turnover

_____

_____

_____

(4 marks)

2. State two limitations of analysis and interpretation of financial statements.
a)

_____

_____

b)

_____

_____

_____   (2 marks)

3. Name two ratios that fall under the category of financial stability ratio .

_____

_____   (2 marks)

4. State two limitations of Ratio Analysis.

i)

_____

_____

ii)

_____

_____

(2 marks)

LABASA SANGAM (SKM) COLLEGE

HOMESTUDY PACKAGE 5

WORKSHEET NO: 2   STUDENTS NAME:_____

SUBJECT: ACCOUNTING   YEAR 11_____

DUE DATE: 18/10/2021

Total marks: 10   Weighting: 5%

Instructions :

   I.   Write the answers in the space provided at the back of this page.
   II. File the lesson notes.
   III. Return the **worksheets only** on the due date as stated above.

The following information given below has been extracted from the books of Singh Enterprises for the year ending 30th June 2020.

Statement of Financial Performance of Singh Enterprises For The Year Ended 30th June 2020

	$
Sales (all credit)	90 000
Less cost of goods sold	54 000
Gross profit	36 000
Less operating expenses	10 400
Net profit	**25 600**

Statement of Financial Position of Singh Enterprises as at 30th June 2020

	$	$	$
Capital at the beginning		28 400	
Add net profit		25 600	
		54 000	
Less drawings		5 300	
Capital at end			**48 700**
Current asset			
Accounts receivable	26 000		
Inventory	43 600	69 600	
Less current liabilities			
Accounts payable	19 400		
Bank overdraft	10 300	29 700	
Fixed asset			
Equipment (net)		13 900	

			53 800	
Long term liabilities				
Mortgage			5 100	
				48 700

Additional Information

a) Opening accounts receivable on 1st July 2019 was $24 000.
b) The business operates for 300 days in a year.

Required

Using the information given, calculate the following ratios and percentages (correct to **two decimal places**) for the year ending 30th June 2020. **Show the formula and full working.**

	Ratios /percentages	Formula	Working	Answer
(a)	Net profit percentage			
(b)	Mark up percentage			
(c)	Acid test ratio			
(d)	Working capital in dollars			

(e)	Rate of return on owners equity			5
(f)	Debt ratio			
(g)	Proprietorship ratio			
(h)	Accounts receivable turnover in days			
(i)	Debt to equity percentage			
(j)	Working capital ratio			

(10 marks)

FORMATIVE ASSESSMENT TWO

SHORT TEST

ACCOUNTING

YEAR 11

TOTAL MARKS: 20

NAME: _____   **Weighting: 20%**

Year 11__   **Due Date: 18/10/21**

Instructions :

   I.   Write the answers in the space provided.

  II.   Return the ***short test*** on the due date as stated above.

PART A   **MULTIPLE CHOICE**   (5 MARKS)

1.   Which of the following indicates the short term financial stability of the business?

    A.   Net profit ratio

    B.   Working capital

    C.   Return on Total assets

    D.   Debtors Turnover

2. Raki's Enterprise's financial position as at 31 December, 2013 was:

Current Assets $45000	Fixed Assets $125000
Current Liabilities $22000	Term Liabilities $38000
Capital – Sami $110 000	

From the above information, the Debt to Equity percentage of the business would be:

A. 64.70 %

B. 54.55 %

C. 34.54 %

D. 20.00 %

3. One of the limitations of analysis and interpretation of financial statements is that it

A. allows comparison

B. helps in making decisions

C. is based on historical cost

D. helps to identify strengths and weaknesses

4. The following information concerns a local business as at 30th June 2014

Total assets	$500 000
Non-current assets	$350 000
Current liabilities	$50 000
Equity ratio	0.75:1

Calculate the current ratio for the business

A. 0.33:1

B. 0.46:1

C. 2.33:1

D. 3.0:1

5. Young had the following account balances: Sales $160 000, COGS $46 000, total expenses $6 240.

What was his net profit percentage?

A. 63.50%

B. 59.5%

C. 67.35%

D. 28.75%

6. State what each group of ratios listed below measure:

    i)   Financial Stability ratios

_____

_____

_____

    ii) Management Effectiveness ratios

_____

_____

_____

(2 marks)

7. State a ratio that is important in evaluating the short term financial stability of the business.

_____   (1 mark)

8. CK's business operates in Suva. Given below is the Statement of Financial Position as at 31st October 2014.

	$	$	$
Proprietorship			
Capital – Kaila Yee		100000	
Add Net profit		40000	
Less Drawings		10000	130000
Represented by:			
Assets			
Cash	40000		
Accounts Receivables	35000		
Property & Equipment	125000		
Inventory	10000	210000	
Less liabilities			
Creditors	25000		
Loan (Payable in 5 yrs)	55000	80000	
			130000

Additional Information

1. Sales all credit $200 000
2. Gross profit $44 000
3. Opening stock $38 000
4. Account Receivables 31st October 2013 $33 000

Required:

a) Using the information above, calculate the following ratios and percentages for the year 2014. Show the formula and full working.
1. Gross profit to sales ratio
2. Net profit to sales percentage
3. Acid test ratio
4. Rate of stock turnover (days)
5. Accounts Receivable turnover
6. Working capital in dollars

7. Mark up- ratio

8. Working capital percentage

Ratios /percentages	Formula	Working	Answer
Gross profit to sales ratio			
Net profit to sales percentage			
Acid test ratio			
Rate of stock turnover in days			
Accounts receivable turnover			
Working capital in dollars			
Mark up- ratio			
Working capital percentage			

(12 marks)

LABASA SANGAM (SKM) COLLEGE
HOME STUDY PACKAGE – YEAR 11 AGRICULTURE
WORKSHEET 13-14
(Based on notes Week 13-14)

NAME:_____   YEAR: 11___   (10 MARKS)
DUE DATE: 19/10/21

LIVESTOCK PRODUCTION

1. List 2 requirements of livestock.   **(2 marks)**

    1._____

    2._____

2. Differentiate between **intensive and extensive** systems of raising livestock **(2 marks)**

    _____
    _____
    _____
    _____

3. State 1 challenges faced by the livestock industry with solutions **(1mark)**

    _____

4. State the **use** and **source** of the following:

FEED	USE	SOURCE
Water		
Energy		
Protein		

                                                           (3 marks)

5. Differentiate between **pasture mating and hand mating**.   **(2 marks)**

    _____
    _____
    _____
    _____

LABASA SANGAM (SKM) COLLEGE
HOME STUDY PACKAGE – YEAR 11 AGRICULTURE
WORKSHEET 14-15
(Based on notes Week 14-15)

4TH- 8TH Oct

NAME:_____   YEAR: 11___   **(10 MARKS)**
DUE DATE: 19/10/21

LIVESTOCK PRODUCTION

1. State **one reason** behind the following practices   **(2 marks)**

   (a) Identification
   _____
   _____

   (b) Dehorning
   _____
   _____

2. Complete the table on animal diseases   **(2 marks)**

Disease	cause	symptoms	treatment	prevention
Enterotoxaemia				

3. State 2 effects of transport and movement on animals **(2 marks)**

   1._____

   2._____

4. Explain the following processes in milking of dairy does.   **(2 marks)**
   A. Cleaning
   _____
   _____

   B. Stripping
   _____
   _____

5. Name 1 product formed by fermenting milk.   **(1 mark)**

   _____

6. Describe the FIRST step involved in slaughtering animals for meat.   **(1 mark)**

   _____
   _____

School: Labasa Sangam(SKM) College   **Year/Level: 11C/D/E**
Subject: Applied Technology   **Student Name: _____**
Worksheet Number: 1-2 / Week: 13   **Date: 27th September 1st Oct 2021**

Due Date: 18th Oct 2021.

Question 1

1. **Define the following terms**.
a. **Refrigeration Effect**

_____
_____
_____ (1mark)

b. **Working Principle**

_____
_____
_____(1mark)

2. **Label the diagram given below.**
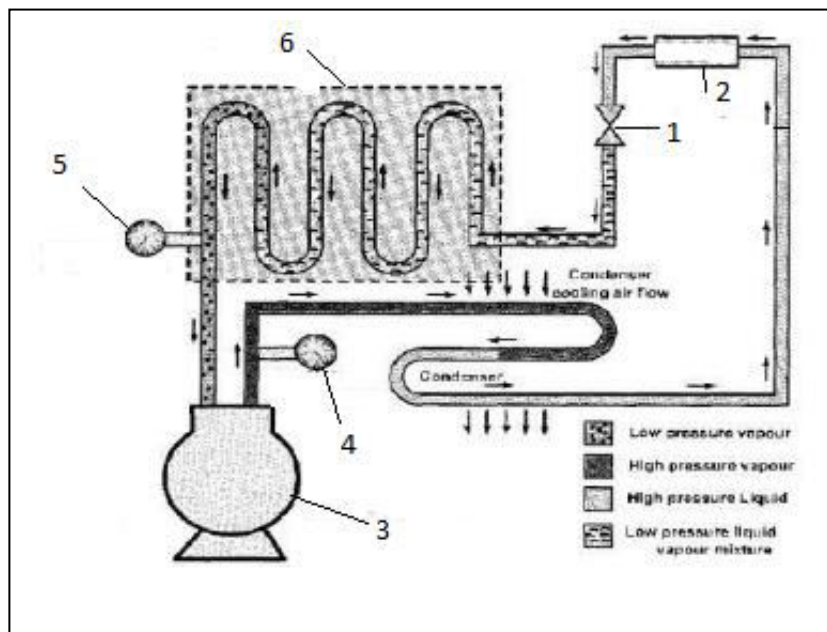
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

(6marks)

a) _____
b) _____
c) _____
d) _____

(2marks)
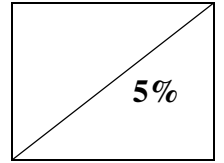
QUESTION: 2   **(10 MARKS)**

5%

Define the following terms given below

Shielded Metal Arc Welding

_____
_____

(1mark)

Specification.

_____
_____

(1mark)

Site Plan

_____
_____

(1mark)

2. Advantages of Manual Metal Arc Welding

_____
_____
_____

(1 ½ marks)

3. **Disadvantages of SMAW**

_____
_____
_____

(1 ½ marks)

Draw a setup of the **cutting with Bench Shears** in the space provided.

(4marks)

10
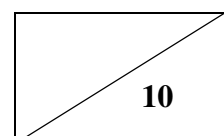
HOME STUDY PACKAGE

LABASA SANGAM COLLEGE

WORKSHEET 13 -BIOLOGY -10 MARKS

NAME: _____   <u>DUE DATE: 18/10/2021</u>

YEAR: _____

1. Differentiate between species and organism (2marks)

   _____

   _____

   _____

2. Give two characteristics of a Population (2 marks)

   _____

   _____

3. List down 3 levels of ecological interactions (3marks)

   _____

   _____

   _____

4. Compare the 3 population distribution   (3 marks)

   _____

   _____

   _____

   _____

LABASA SANGAM (SKM) COLLEGE

YEAR 11 CHEMISTRY

NAME: _____   YEAR: _____

WORKSHEET 12 (pages 10-16 strand 4 Materials notes)   **[10 MARKS]**

Duration: 1 Week   Due Date: 18/10/21

1. State **2** benefits of copper to humans.

   _____

   _____ **(2 marks)**

2. Copper is found in many different types of food sources. Give **1** of the top sources of copper food.

   _____ **(1 mark)**

3. What is **copper toxicity**?

   _____

   _____ **(1 mark)**

4. State **2** properties of non-metals.

   _____

   _____ **(2 marks)**

5. Define **allotropes**.

   _____

   _____ **(1 mark)**

6. State the **3** main allotropes of sulphur.

   _____

   _____

   _____   **(3 marks)**

Worksheet Number :1   **Name of the Student:** _____

Due Date: 27th September,2021   **Year:** _____

1. Define Free trade.

    _____
    _____
    _____(1mark)

2.State two advantages of free trade.

    _____
    _____
    _____
    _____
    _____(2marks)

3.State two disadvantages of free trade.

    _____
    _____
    _____
    _____
    _____(2marks)

4. Define Protection.

    _____
    _____
    _____(1mark)

5. State two reasons for protection

_____
_____
_____
_____
_____(2marks)

6. State two effects for protection

_____
_____
_____
_____
_____(2marks)

LABASA SANGAM (SKM) COLLEGE

YEAR 11 ECONOMICS WORKSHEET

HOME STUDY PACKAGE-5

**Worksheet Number :2**   **Name of the Student:** _____

Due Date: 27ᵗʰ September,2021   **Year:** _____

Question

"while developing countries like Fiji is enjoying benefits from free trade , they also need some form of protection".

With reference to the above statement ,discuss:

- **Three** forms of protectionism.
- **Three** reasons in favour of protectionism.
- **Three** arguments against protectionism if Fiji is ever to compete with developed countries.
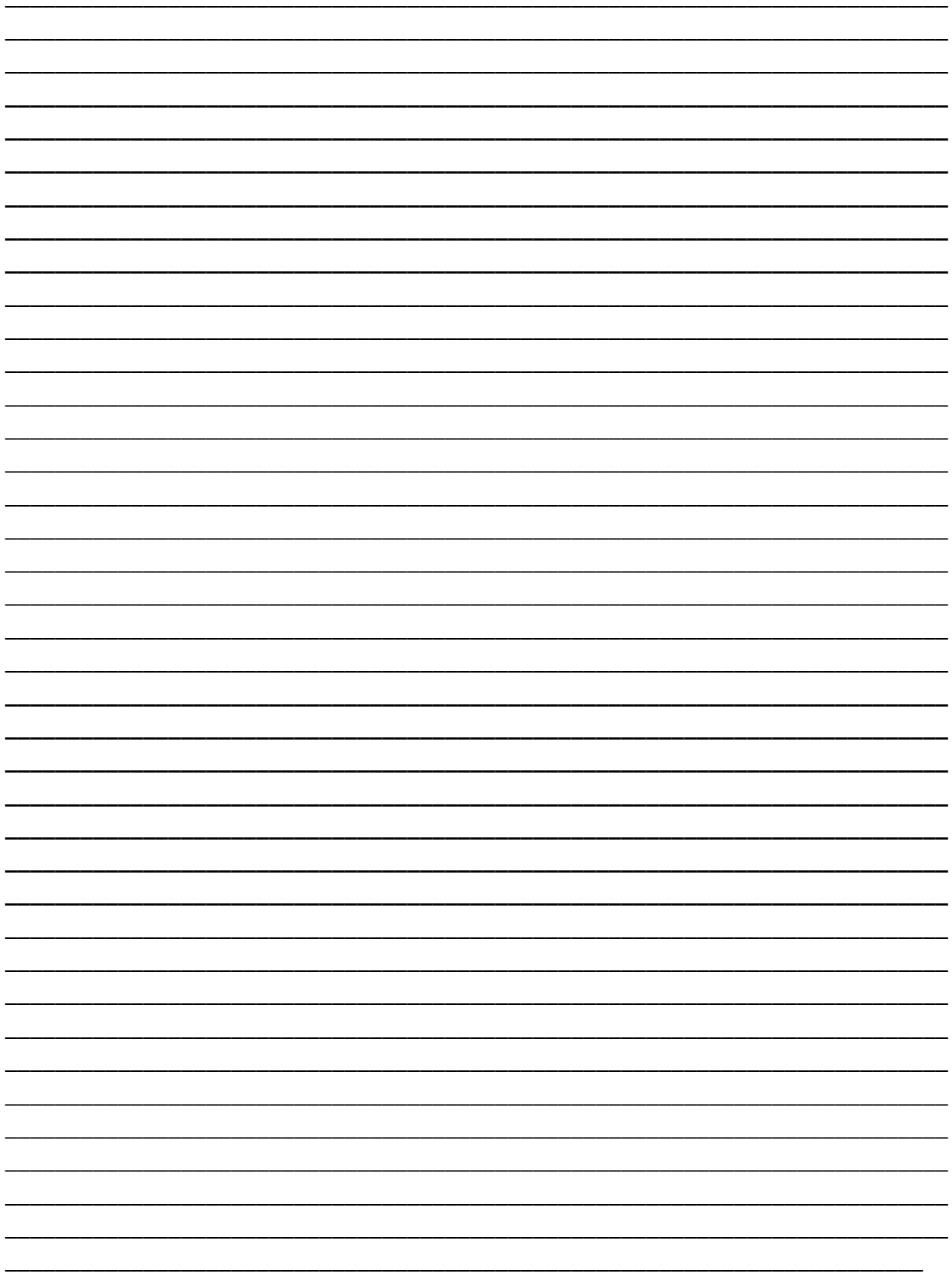
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LABASA SANGAM (SKM) COLLEGE

YEAR 11 GEOGRAPHY HOME STUDY PACKAGE

TOPIC 4: VEGETATION

WEEK 10,11 &12

1. What is vegetation?   **(10 Marks)**

_____

_____ (1 mark)

2. Differentiate between **native plants** and **exotic plants** with **examples**

_____

_____ (2 marks)

3. List 4 important functions of vegetation in the ecosystem

_____

_____

_____

_____ (2 marks)

4. Name 3 native trees and 3 exotic trees in Fiji

_____

_____

_____ (2 marks)

5. Name 3 factors that affect vegetation distribution

_____

_____

_____ (2 marks)

6. Name the 5 types of vegetation regions

_____

_____ (1 mark)

…THE END…

LABASA SANGAM (SKM) COLLEGE
YEAR 11 GEOGRAPHY HOME STUDY PACKAGE
TOPIC 4: VEGETATION
WEEK 10,11 &12   (10%)

1. Discuss how the altitude and latitude affects vegetation distribution

_____
_____ (1 mark)

2. Explain the relationship between **precipitation** and **vegetation**

_____
_____ (1 mark)

3. List 3 characteristics of a tropical rainforest

_____
_____ (2 marks)

4. Where will you find tundra forest? State one of its features

_____
_____ (2mark)

5. Name 3 characteristic of coniferous forest

_____
_____(2 marks)

6. **Definitions**
a. Canopy -

_____
_____ (1 mark)

b. Epiphytes -

_____
_____ (1 mark)

THE END

WEEK -13   **WORKSHEET -1** -हिन्दी   **YEAR 11**

BATCH 5   NAME:----------------------------------

WEEK 13   YEAR : ----------------------------------

                                     DUE DATE: 19th october   10

⊙ मनुष्य जिंदा लाश सा क्यों बन जाता है ?   (1)

⊙. मनी सिंह   की परेशानी क्यों ओर ज्यादा बढ़ गई थी ?   (1)

⊙ मनी सिंह ने सूवा जाकर नेटिव लैंड ट्रस्ट बोर्ड के दरवाज़े बार-बार क्यों खटखटाए?
(1)

⊙ तापा का टुकड़ा देख कर "बहुत सुन्दर" किस ने कहा था   (1)

⊙ अन्दर से मेरी बांसुरी उठा लाओ'| यह वाक्य किसने किस्से कहा था ?
(1)

⊙ रमलू मतंगाली के जोनाते,कीनी ,मोसेसेआदि कईवीतियों को आते देख नंदू क्यों घबरा
    गया   (1)

▪ बको नहीं हिन्दुस्तानी लीज़ मांगों ,ज़मीन नहीं |" ये शब्द किसने कहे थे

८ मृग तृष्णा किसे कहते हैं ?

▲ नवाइदोम्बा जाते-जाते श्याम सिंह अपने मरने के बाद आत्मा को शांति के लिए नंदू को क्या करने के लिए बता रहा था ?

LABASA SANGAM [SKM] COLLEGE

YEAR 11 HISTORY ASSESSMENT

WORKSHEET 13

GOVERNMENT AND GOVERNANCE: UNIT 1-6

SECTION A: SHORT ANSWER QUESTIONS **(10 Marks)**

Use your knowledge of the topic to answer the questions that follow. Each question is worth two marks each. Write 1-3 sentences.

1. Name the type of government used in Fiji before the arrival of Europeans.? **(2 Marks)**

_____

_____

_____

_____

_____

_____

_____

_____

2. Define the concept interim government.? **(2 Marks)**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

3. Describe a feature of a democratic government?   **(2 Marks)**

_____

_____

_____

_____

_____

_____

_____

_____

_____

4. Explain a reason for the establishment of the Fijian Administration.   **(2 Marks)**

_____

_____

_____

_____

_____

_____

_____

_____

_____

5. Describe the importance of a constitution to a nation.?   **(2 Marks)**

_____

_____

_____

_____

_____

_____

_____

_____

THE END

HOME ECONOMICS

Name: _____   **Year: 11____**

TOTAL MARKS: 10   **WEIGHTING :5 %**

NOTE:
1. *Write all your answers in the space provided.*
2. *Always use your text book for reference.*
3. *Return the completed worksheet on the 18th of October 2021(Worksheets 10- 12)*
4. *For further enquires, do not hesitate to ask me and write your name on every page.*
5. *There is no need for you to rewrite the summarised notes. File them properly and neatly.*

WORKSHEET 13

1. Name any **two** types of fasteners

   _____   _____

                                                                (1 mark)

2. Define the term **Fasteners**

_____

_____

_____

                                                                (1 mark)

3. State **two** points to consider when selecting a garment with a zip.

(i) _____

   _____

(ii) _____

_____

                                                                (2 marks)

4. State **two** tips on how to take care of the zip

(i) _____

_____

(ii) _____

_____

(2 marks)

5. A nylon fastener consists of **two** parts. Name those parts.

(i) _____   (ii) _____

(1 mark)

6. Explain any **three** rules for sewing on buttons.

(i) _____

_____

(ii) _____

_____

(iii)_____

_____

(3 marks)

WORKSHEET 14

1. Explain the purpose of a shank.

_____

_____

(1 mark)

2. Identify and explain the techniques shown below

_____

_____

_____
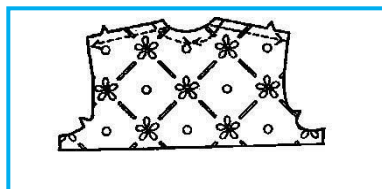
(ii)

_____

_____

_____
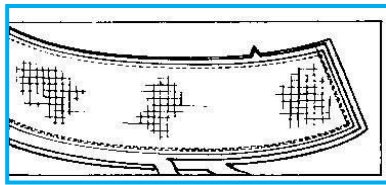
(iii)

_____

_____

_____
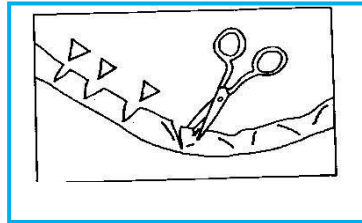
(6 marks)

3. Name the **three** types of seams

(i) _____

(ii)_____

(iii)_____

(3 marks)

Name:_____   **Year: 11_____**

TOTAL MARKS: 20   **WEIGHTING :20 %**

NOTE:
   1. *Write all your answers in the space provided.*
   2. *You may use your text book for reference.*
   3. *Return the completed worksheet on the 18TH of October   2021 with Worksheets 13- and 15*
   4. *For further enquires, do not hesitate to ask me and write your name on every page.*
   5. *This open book test is based on Strand 3 – the notes that we have covered so far.*

1.   Explain the function of a care label.

_____

_____

                                                            (1 mark)

2.   Write any **three** methods of straightening the fabric

(i) _____

_____

(ii)_____

_____

(iii)_____

_____

                                                            (3 marks)

3. Explain the function of mordant in tie dyeing and give an example of mordant.

_____

_____

                                                            (1 mark)

4. State the function of the following parts of a sewing machine.

i) Bobbin winder_____

_____

ii) Feed dog _____

_____

(2 marks)

5. Identify the **two** traditional Fijian artefacts that are still prepared by the I- Taukei.

(i) _____

(ii) _____

(2 marks)

6. State the use of the following types of sewing machines:

(i) Over locker_____

_____

(1 mark)

(ii) Treadle sewing machine _____

_____

(1 mark)

6. Explain the function of a **buttonholer.**

_____

_____

(1 mark)

7. Study the picture below and answer the following questions.
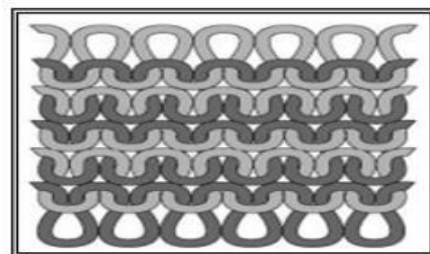
Source: Year 11Home Economics
Textbook

(i) Identify the type of knitting illustrated in the picture.

_____

(1 mark)

(ii) State **two** properties of knitted fabrics that make it a popular wear.

1. _____

_____

2._____

_____

(2 marks)

8. Sewing machines need regular oiling.

(i) Explain the purpose of oiling sewing machines.

_____

_____

(1 mark)

(ii) Why is it important to run the machine after oiling on scraps of material prior to the actual

sewing?_____

_____

(1 mark)

9. Alterations have been made to the sleeve pattern shown below.
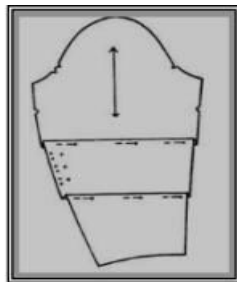
Source: Year 11Home Economics Textbook

(i) Describe the procedure used in altering the sleeve pattern above.

_____

_____

_____

_____

(2 marks)

(c) French seams are considered to be strong seams.

 Name one garment where the French seam is most useful.

_____

(1 mark)

6
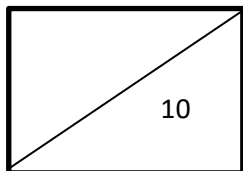
Name:_____
Year:_____

LABASA SANGAM (SKM) COLLEGE
HOME STUDY PACKAGE WEEK 14
YEAR 11 PHYSICS
WORKSHEET 2 (weighting 5%)

1.   When a glass rod is rubbed with silk, which of the following statements best describes what happens?   **(1mark)**
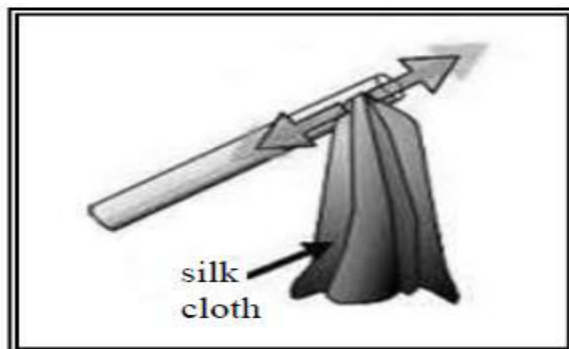
A.   Protons are removed from the rod.
B.   Electrons are removed from the rod.
C.   Neutrons are removed from the rod.
D.   Atoms are removed from the rod

2.   Which of the following materials is an electrical conductor?   **(1mark)**
A.   Iron   B.   Glass   C.   Plastic   D.   Rubber

3.   An electroscope is a device that is used to find if an object is   **(1mark)**
A.   hot.   B.   charged.   C.   magnetic.   D.   radioactive.

4.   The diagram of a gold leaf electroscope is given below. Name the parts of the electroscope labeled **A**, **B**, **C** and **D**.

A -   _____   **B** -   _____

C -   _____   **D** -   _____

                                                                                                (2 marks)

1.
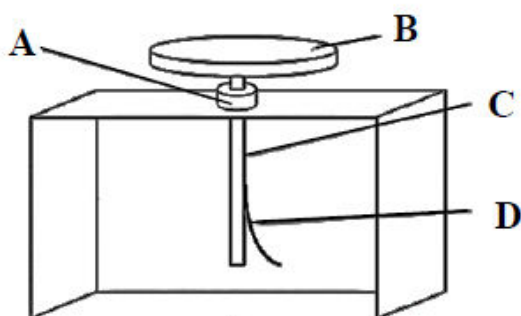
5.   Two single point charges are placed at a small distance apart as shown below.
       Draw electric field lines between the two point charges.

       (+)   (-)

                                                                    (2 marks)

6.   Briefly state the **difference** between **conductors** and **insulators**.

       _____

       _____

       _____

       _____

       _____

       _____**(2 marks)**

7.   Using an example, state the meaning of **charge is conserved**.

       _____

       _____

       _____

       _____

       _____**(1 mark)**

2.

School: Labasa Sangam(SKM) College
Subject: Technical drawing
Week:13/worksheet:1-3

Year/Level:11C/D/E
Due Date:18th October 2021
Date:27th September -1st October 2021

Question:1

A. Given: A sketch of a bar 750 mm long, is pivoted as shown. Three loadings of **M1** kg, 16 kg and 10 kg are attached to the bar as shown.
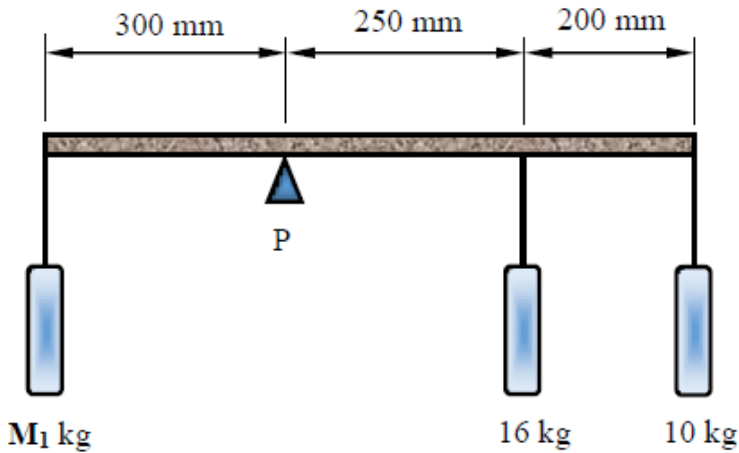
Sketch NTS

Required:

(i) Determine the load **M1** analytically, which is needed to keep the bar horizontal. **(5 marks)**

Question:1(i)			
1	Correct formula	1	
2	Correct working	1	
3	Correct answer	2	
4	Correct unit	1	

(ii)Define moment of a force.

_____

_____ **(1 mark)**

(iii).State the Principle of Moments.

_____

_____

(1mark)

(iv)What force would be needed to balance the beam shown below. **(4 marks)**
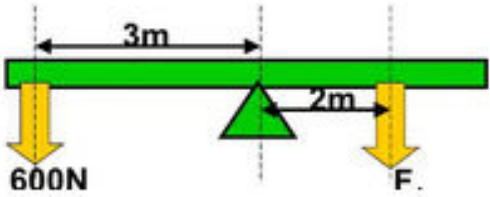
Question:1(iv)			
1	Correct formula	1	
2	Correct working	1	
3	Correct answer	1	
4	Correct unit	1	

(v). A bar 750mm long, is pivoted as shown. Two loadings of 10 kg, 16 kg and 12 kg are attached to the bar as shown. Determine the moment of the forces about the pivot, P. (use g = 10m/s2). **(4 marks)**
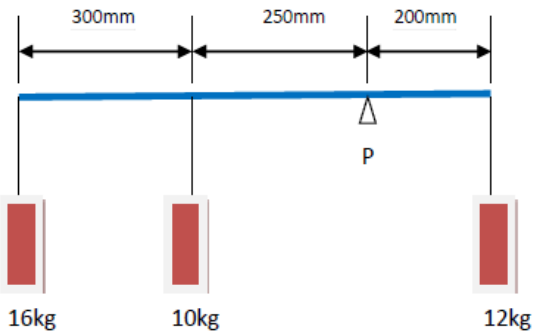
where | W = mg |

F_1 = 16kg x 10 = 160N
F_2 = 10kg x 10 = 100N
F_3 = 12kg x 10 = 120N

Question:1(v)			
1	Correct formula	1	
2	Correct working	1	
3	Correct answer	1	
4	Correct unit	1	

15

Question:2

NAME: _____

YEAR: _____

A. Define the moment of a force.

_____

_____

(2 marks)

B. State Varignon's Theorem.

_____

_____

(2 marks)

C. Compute the moment of the force about the point A in the following cases:

(a)

0.5 m

A

450 N
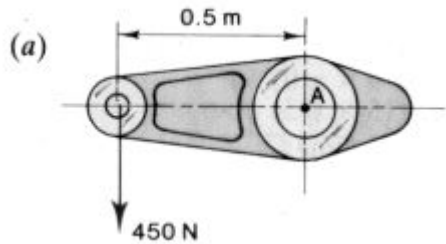
Question:2(a)			
1	Correct formula	1	
2	Correct working	1	
3	Correct answer	1	
4	Correct unit	1	

(b)

450 N

A

0.5 m
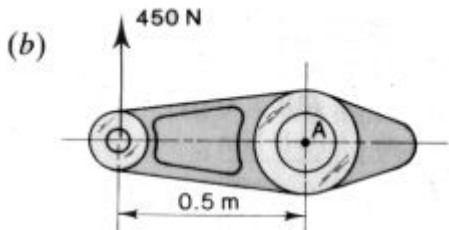
Question:2(b)			
1	Correct formula	1	
2	Correct working	1	
3	Correct answer	1	
4	Correct unit	1	

(4 marks)

(c)

100 N

0.5 m   1 m

A

200 N
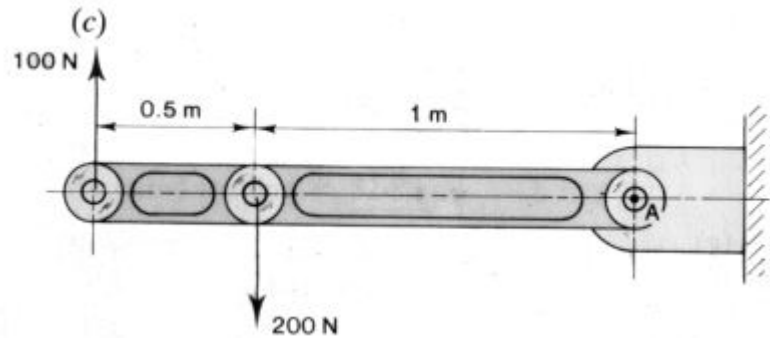
Question:2(c)			
1	Correct formula	1	
2	Correct working	1	
3	Correct answer	1	
4	Correct unit	1	

(4 marks)

(d)

2 m

25°

A

9 kN
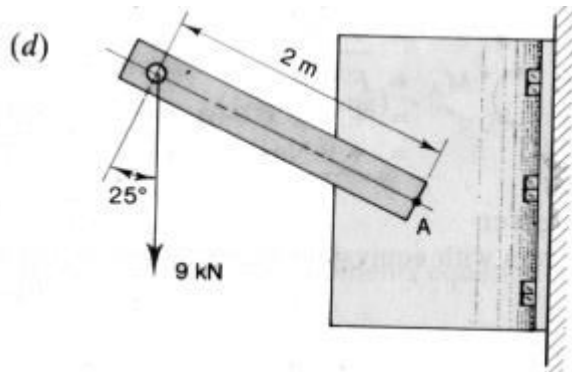
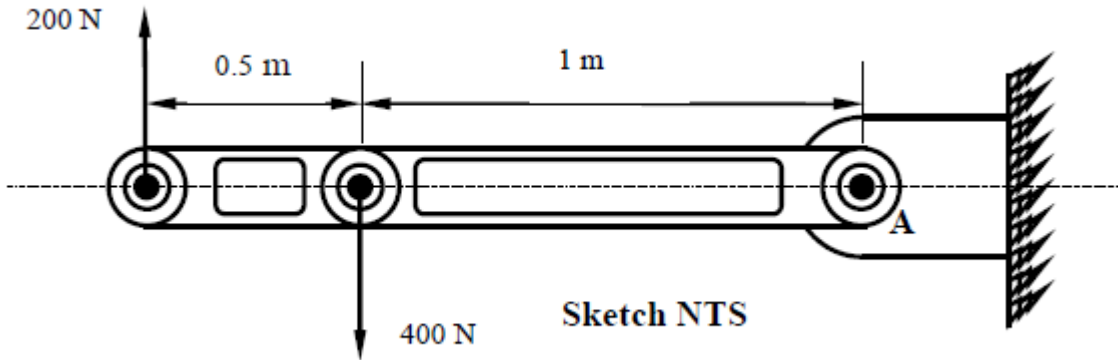| Question:2(d)			
1	Correct formula	1	
2	Correct working	1	
3	Correct answer	1	
4	Correct unit	1	

(4 marks)

20

NAME: _____
YEAR: _____

Question:3   **(10 marks)**

A. **Given:** A **1.5 m** long bar is pivoted. Two loadings of **200 N** and **400 N** are attached to the bar as shown below.

5%

200 N

0.5 m   1 m

Sketch NTS

400 N

A

B. Given: A bar 750mm long, is pivoted as shown. Two loadings of 10 kg, 16 kg and 12 kg are attached to the bar as shown.

   Required: Determine the moment of the forces about the pivot, P. (use g = 10m/s2).   **(4 marks)**

300mm   250mm   200mm

P

(i) Compute the moment of the force about the point **A**.   **(4 marks)**

where   **W = mg**

16kg   10kg   12kg

F_1 = 16kg x 10 = 160N
F_2 = 10kg x 10 = 100N
F_3 = 12kg x 10 = 120N

Question:3 A(i)		
1	Correct formula	1
2	Correct working	1
3	Correct answer	1
4	Correct unit	1

(i) Define moment of force.
_____
_____
_____
       (1 mark)

(ii) State Varignon's Theorem.
_____
_____
_____
_____
       (1 mark)
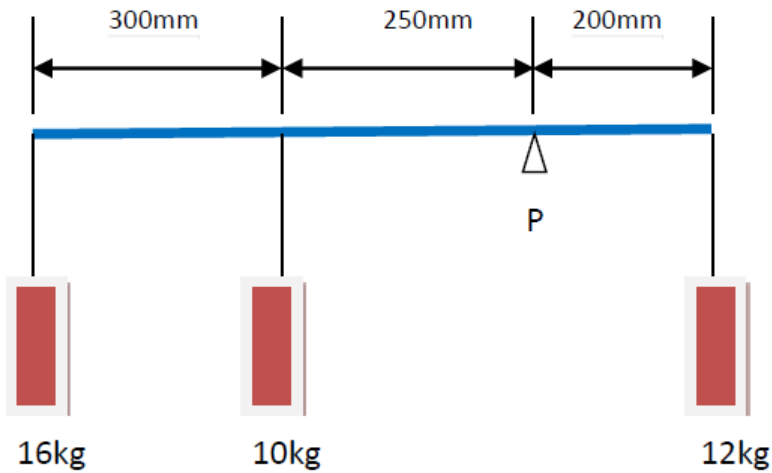
Question:3(B)		
1	Correct formula	1
2	Correct working	1
3	Correct answer	1
4	Correct unit	1

10