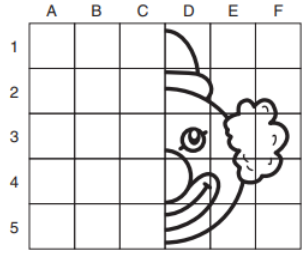
SECTION A [30 MARKS] ANSWER **ALL** QUESTION	
Question 1	[30]
Direction: For multiple choice questions, there are four alternatives: A, B, C, and D. Choose the correct alternative and circle it. Do not circle more than ONE alternative. If there is more than one choice circled, No score will be awarded.	
i. What fraction is represented by the picture given below? 	
A $\frac{5}{4}$ B $\frac{5}{6}$ C $\frac{11}{12}$ D $\frac{11}{4}$	
ii. The area of the two different rectangles is 12 cm^2 and 18 cm^2 respectively. What could be the common side length of the two rectangles?	
A 2 cm and 3 cm B 3 cm and 4 cm C 4 cm and 6 cm D 6 cm and 9 cm	
iii. The picture given below is incomplete. In which square should you draw the eye so that the picture is symmetrical? 	
A D 3 B C 3 C B 3 D A 3	

iv. How many dots will be there in figure 5?

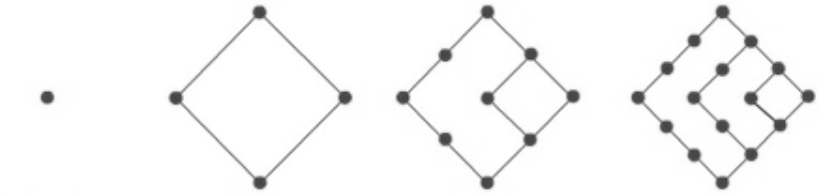


Figure 1 Figure 2 Figure 3 Figure 4

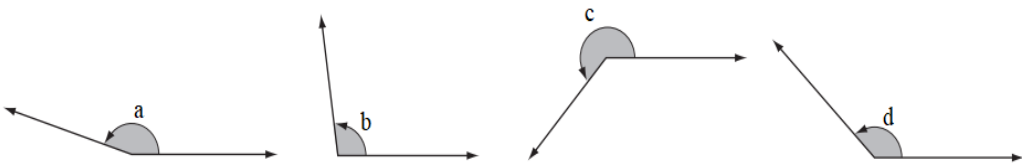
A 25 dots

B 30 dots

C 36 dots

D 49 dots

v. Estimate the angles given below.



Which of the following angles are arranged in ascending order?

A angle a; angle b; angle c; angle d

B angle b; angle d; angle c; angle a

C angle d; angle c; angle b; angle a

D angle b; angle d; angle a; angle c

vi. Study the image carefully and answer the question that follows.

Before use After use

What percent of the battery is used?

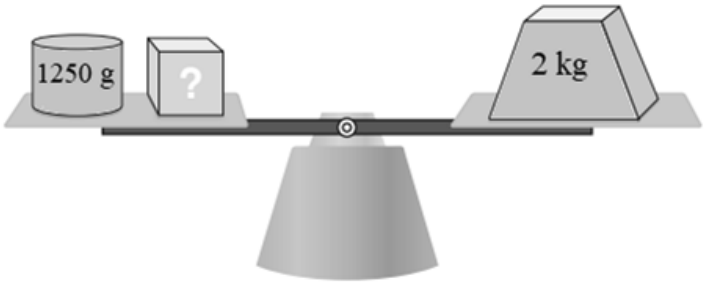
A 60%

B 40%

C 10%

D 2%

vii. The scale given below is balanced.



What is the mass of the cube?

A 18,750 g

B 3,250 g

C 1,250 g

D 750 g

viii. A shopkeeper charges Nu 5 for every 4 chocolates. How much do you need to pay for 20 such chocolates?

A Nu 16

B Nu 20

C Nu 25

D Nu 30

ix. Geeta tries to draw a triangle using the following dimensions.

I. 3 cm; 4 cm; 5 cm

II. 2 cm; 4 cm; 6 cm

III. 4 cm; 6 cm; 8 cm

Which sets of the dimension can form a triangle?

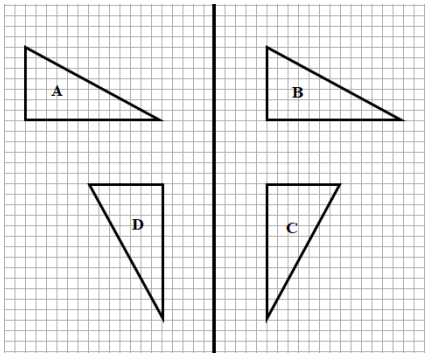
A I and II

B I and III

C II and III

D I, II, and III

x. Which transformations are used to moving **Shape A** to **Shape B, Shape B** to **Shape C** and **Shape C** to **Shape D**?



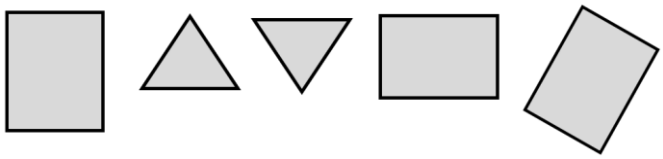
A translate, rotate and reflect

B rotate, reflect and translate

C translate, reflect and rotate

D reflect, rotate and reflect

xi. The shapes given below are the five faces of a 3-D object.



What is the name of the object?

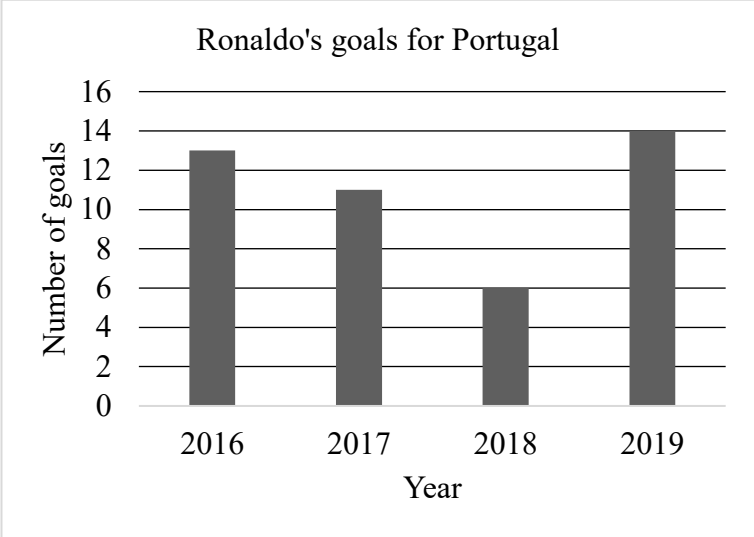
A Rectangular pyramid

B Triangular pyramid

C Rectangular prism

D Triangular prism

xii. Study the graph and answer the question that follows.



What is his mean score?

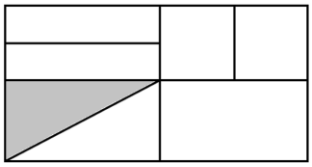
A 11 goals

B 12 goals

C 14 goals

D 44 goals

xiii. What part of a whole is shaded in the shape given below?



A $\frac{1}{7}$

B $\frac{1}{8}$

C $\frac{6}{7}$

D $\frac{6}{8}$

xiv. Kelly spent Nu 10 every day. If she still has Nu 20 after 7 days, how much ngultrum did she have in the beginning? Which of the following equation represent the above situation?

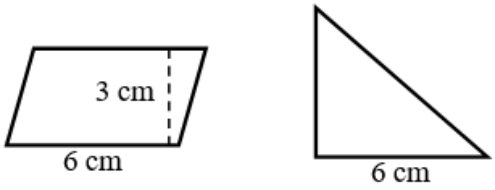
A $10x + 7 = 20$

B $7x + 10 = 20$

C $x - 70 = 20$

D $70 - x = 20$

xv. The shapes given below covers equal area.



What is the height of a triangle?

A 3 cm

B 6 cm

C 9 cm

D 18 cm

SECTION B [30 MARKS]

ATTEMPT **ALL SIX** QUESTIONS

Question 2

a) Bhutan exported commodities worth Nu 4.65 billion in April 2023 to Bangladesh.

i. Write the above ngultrum in standard form. [2]

ii. What is in the place value of 3 in 1,250,300,000? [1]

b) Which animal is the fastest in the table given below? [2]

Wild animal	Average speed
Reindeer	40 km/30 min
Tiger	65 km/h
Kangaroo	210 km/3 h
Ostrich	180 km/ 2 h

Question 3

a) The following data represent the shoe sizes sold by the shopkeeper.

Shoe Sizes
6, 10, 7, 6, 9, 8, 6, 5, 5, 6, 7, 10, 6, 8, 6, 8, 5, 6

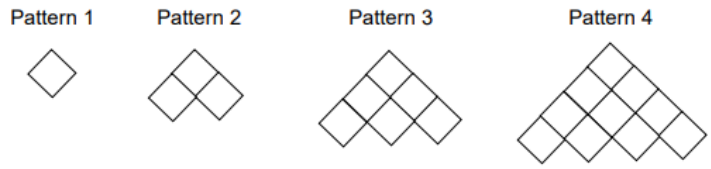
i. If you were a shopkeeper, which shoe size will you bring the maximum for sale? Why? [2]

ii. What type of graph would you use to represent the data given in question 3 (a)? [1]

b)	In the year 2019 a farmer in Phobjikha produced about 5 tonnes of potatoes and sold at the rate of Nu 24/kg. How much did the farmer earn?	[2]
Question 4		
a)	Design a house and calculate the total area.	[3]

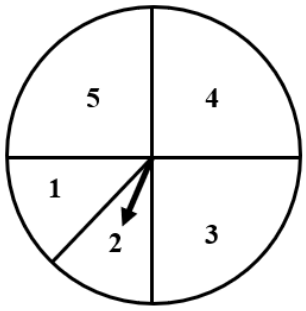
b)	Two students volunteered to clean the classroom. Student A cleaned $\frac{1}{3}$ and Student B cleaned $\frac{2}{5}$ of the floor respectively. What part of the floor is left uncleaned?	[2]
Question 5		
a)	Yugyel says, if we rotate any 2-D shape $\frac{3}{4}$ turn ccw or $\frac{1}{4}$ turn cw will form same image. Do you agree? Why or why not?	[2]

b) A private firm bought 5 chairs at the cost of Nu 1349.99 for each.	
i. Estimate the total cost to the nearest whole number.	[1]
ii. Find the actual total cost.	[2]
Question 6	
a) i. What is the sum of the interior angles for any given triangles?	[1]

ii.	A group of students used toothpicks to create the following pattern.  How many squares will be there in pattern 6?	[2]
b)	Tashi solved the equation as shown below. $2x + 3 = 7$ $2x = 10$ $x = 5$ Do you think Tashi solved the equation correctly? Justify	[2]

Question 7

a) For the spinner given below, what is the probability of spinning 2? [2]



b) Write at least three differences between line of symmetry and plane of symmetry. [3]

Line of symmetry	Plane of symmetry

Formulas

1) Perimeter of a rectangle = 2(l + w) or l + w + l + w
2) Perimeter of a square = 4 × s or s + s + s + s
3) Area of a rectangle = l × w
4) Area of a square = s × s
5) Area of a parallelogram = b × h ÷ 2
6) Area of a triangle = (b × h) ÷ 2 or $\frac{b \times h}{2}$
7) Base of a triangle = $\frac{2 \times A}{h}$
8) Height of a triangle = $\frac{2 \times A}{b}$
9) Volume of a rectangular prism = l × w × h
10) Volume of a cube = s × s × s
11) Thoeritical probability = $\frac{Number\ of\ favourable\ outcomes}{Number\ of\ possible\ outcomes}$
12) Relationship between volume and capacity: 1 cm^3 = 1 mL = 1 g
13) 1 tonne = 1000 kg
14) 1 kg = 1000 g

ROUGH WORK

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