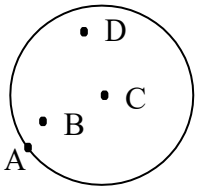
Nalanda Vidyalaya – Colombo 10

Unit Test Project

Grade 6	Mathematics	**Unit:** 1- Circles

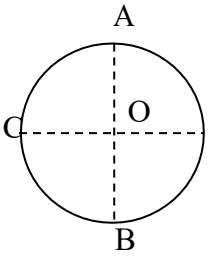
- Answer all questions.

1) What is the center of the circle?

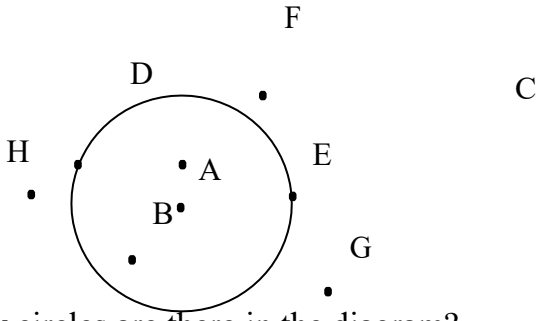


2) Fill in the blanks.

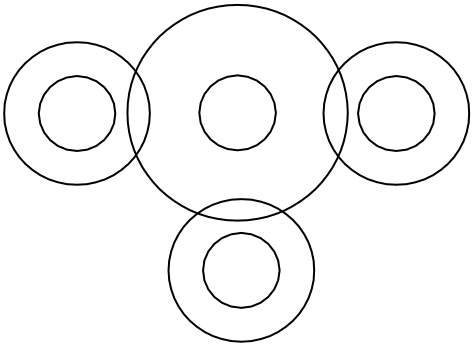
OA = ... = ... = ...



3) Name the points inside the circle.

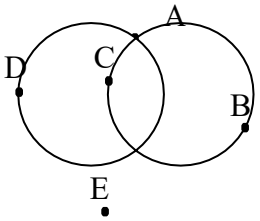


4) How many circles are there in the diagram?



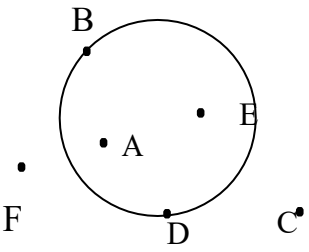
5) a)..... is the common point for the two circles.

b)..... is the point outside the circles.



6) Which letters indicate positions on the circle.

7) Select various items which have circular shape, and using them draw several circles which are different in size to each other.



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Unit Test Project

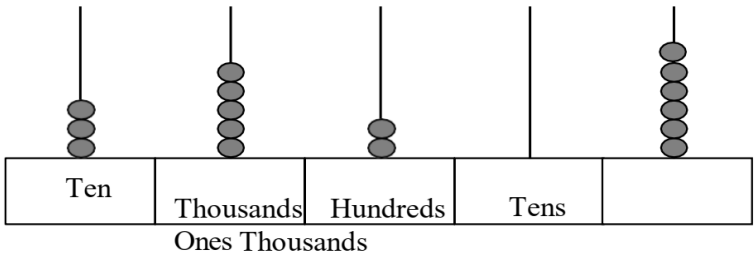
Grade 6 | Mathematics | **Unit:2- Place Value**

1) Separate this number into zones. 85078400

2) Write in words.
   a) 2 510
   904
   b) 25 900 708 500

3) Write the largest number that can be written using the digits 5, 2, 9 and 6.

4) Write the number in words represented on the following abacus.



5) Write these numbers in ascending order.
   65 987, 11 205, 29 750, 10 050, 48 504

6) By using all the digits 7, 9, 8 and 2, write the largest number that can be written such that 8 is in the ones place.

7) In the number 7483, the value represented by 4 is how many times the value represented by 8 ?

8) Represent 6125 on an abacus.

9) The ones place of the number 852 □ was erased.
   i) What is the largest digit can be written to become an odd number.
   ii) What is the smallest digit can be written to become an even number.

10) Write in numerals.
   i) Twelve thousand five hundred two – .....
   ii) Two billion fifty six - .....

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Grade 6 | Mathematics | **Unit:3 - Mathematical operations on whole numbers**

1) Price of a piece of cake is Rs. 45.00. Find the price of 8 pieces of cake.

2) i) 558 ÷ 9 = ... ii) 708 ÷ 6 = ...

3) Fill in the blanks.

i) 539 × ..... = 53 900 ii) 45 × ..... = 45 000

4) i) Add

2 509
+ 358
1 750

ii) Subtract

7 000
- 3 954

5) Multiply. 694 × 37

6) The van fare was Rs. 9 360 for a journey made by 13 people. If this cost was met equally by 12 of them, how much did each pay?

7) Simplify. i) 34 000 ÷ 100 = _____ ii) 10 000 ÷ 10 = _____

8) Simplify. i) 6285 + 719 = _____ ii) 3710 + 32 + 8 = _____

9) A factory produced 2 459 yoghurts during the first week and 3 608 yoghurts during the second week. How many more yoghurts were produced in the second week than in the first week?

10) Fill in the blanks using suitable values.

i)
$$\begin{array}{r} 4\ 5 \\ \times\ 1\ 4 \\ \hline 1\ 8\ \square \\ 4\ \square\ 0 \\ \hline 6\ \square\ 0 \\ \hline \end{array}$$

ii)
$$\begin{array}{r} 5\ 1\ 5 \\ \times\ 3\ 6 \\ \hline 3\ 0\ \square\ \square \\ \square\ \square\ 4\ 5\ \square \\ \hline 1\ 8\ \square\ \square\ 0 \\ \hline \end{array}$$

Nalanda Vidyalaya – Colombo 10

Unit Test Project

Grade 6 | Mathematics | **Unit:4-Time**

- Answer all questions.

1) Fill in the blanks.

i) 2 minutes = ... seconds

ii) 180 seconds = ... minutes

iii) 120 minutes = ... hours

iv) 2 hours = ... minutes

v) 190 minutes = ... hours ..... minutes

2) a)

hours	minutes
2	45
+ 6	35

b)

hours	minutes	seconds
4	35	48
+ 2	10	54

3) i) A cricket match starts at 10.30 and finishes at 16.30. What is the time taken for the match?

ii) Write the above two times in 12 hour clock.

4) The first term of this year started on the 2nd of January 2020. Write this date in standard form.

5) A bus which left Colombo at 3.15 p.m. reached Kalutara at 4.40 p.m. Find the time taken for the journey.

6) An athlete started a running race at 13:40:30 and ended at 13:40:58. Find the time taken for the event.

7) A meeting was started at 12.50p.m. and it was ended at 2.55p.m. Find the duration of the meeting.

8) 1 day = ☐ hours = ☐ minutes = ☐ seconds

According to the above express 5 days in hours.

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Unit Test Project

Grade 6 | Mathematics | **Unit:5 - Number line**

- Answer all questions.

1) Fill in the blanks using < or > symbols.

a) 5 ..... – 2 b) – 4..... 1

2) Arrange the given numbers in descending order.

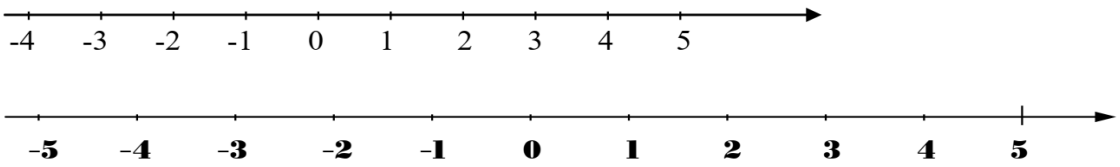
5, – 4, 3, 0 , – 2

3) Draw a number line from (– 4) to (+5)

4) Write down all the integers that lie between – 5 and 3.

5) Illustrate –3 and 2 on the given number line.

6)



i) Mark the numbers 0, 2 and 5 on the above number line.

ii) Mark -5, -3 and -1 too.

iii) Put > or < using the above number line.

a) 5 ..... 2 d) 2 ..... – 1

b) – 3 ..... – 1 e) 0 ..... – 3

c) – 1 ..... – 5 f) - 5 0

iv) Write the above numbers in descending order.

v) Write the a) positive integers between - 5 and 5

b) negative integers between - 5 and 5

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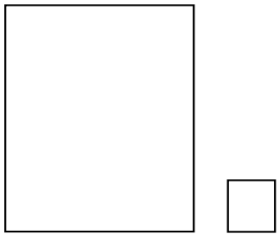
Unit Test Project

Grade 6 | Mathematics | **Unit:6 - Estimation and Rounding off**

- Answer all questions.

1) Round off to the nearest 10.

i)	22 ……..	vi)	95 ……..		
ii)	36 ……..	vii)	73 ……..		
iii)	47 ……..	viii)	88 ……..		
iv)	69 ……..	ix)	55 ……..		
v)	53 ……..	x)	44 ……..		



2) How many small squares are needed to cover the large square.

3) If a number is rounded off to the nearest 10, the answer is 40. Find the minimum value it can be taken.

4) Mark true (T) or false(F).
   i) Zero is a negative integer
   ii) 6 > - 6 is false
   iii) The numbers to the left of zero on the number line are negative numbers.

5) Write down two situations, where estimation is used in day to day life.

6) When whole number is rounded off to the nearest multiple of ten, the number 60 is obtained. Write down all the possible numbers that the above whole number could be.

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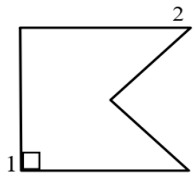
- Answer all questions.

1) Draw an angle.

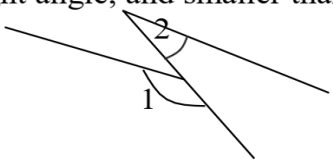
2) Give 3 examples of places where you can find angles in the environment.

3) Name two types of angles in the figure.



4) Name two angles smaller than straight angle.

5) What is the name used to identify the angle larger than a right angle, and smaller than a straight angle



6) Write the types of angles denoted by the numbers.
1. .....
2. .....

7) What is the type of angle between the minute hand and the hour hand when the time is 6.00 p.m.?

8) Draw diagrams to denote the following angles.
Right angle
Obtuse angle
Straight angle
Reflex angle
Acute angle

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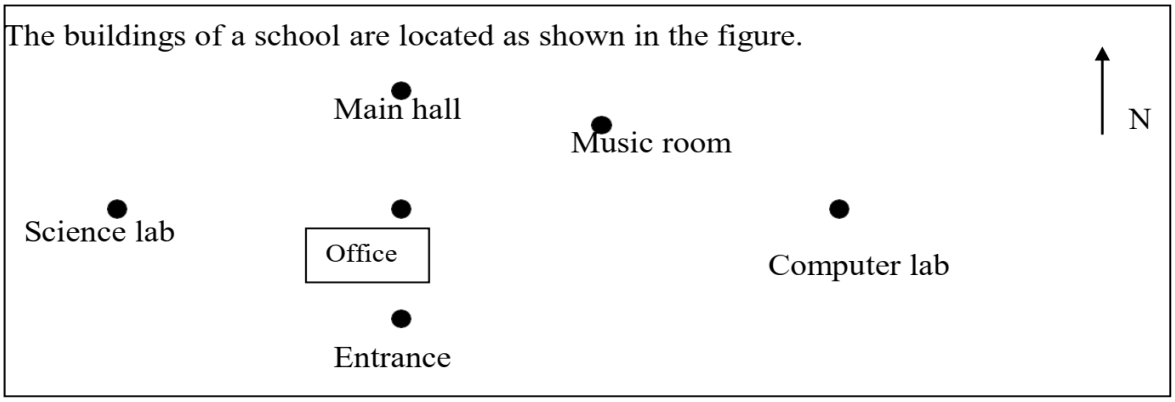
Grade 6 | Mathematics | **Unit:8 - Directions**

- Answer all questions.

1) The buildings of a school are located as shown in the figure.



Fill in the blanks.

i) The main hall is situated in the ..... direction from the entrance.

ii) The music room is situated in the ..... direction from the office.

iii) ..... is situated in south east direction from the music room.

iv) Name the 2 buildings located west to the computer lab

2) Mention the main directions.

3) Illustrate the main directions in a diagram.

4) There are several directions which makes reflex angles with the direction North clockwise. What are they? Draw sketches for them.

5) Write 3 examples for each of the following.

i) Name 3 places in the school where you can find vertical planes.

ii) Name 3 instruments in the school in which you can find horizontal planes.

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Grade 6 | Mathematics | **Unit : 9 – Fractions**

Part I

(1) Write a unit fraction with a denominator less than 10.

(2) Write 3 examples for proper fractions.

(3) Fill in the blanks.

i) $\frac{3}{5}$ is _____ $\frac{1}{5}$s

ii) $\frac{6}{7}$ is _____ $\frac{1}{7}$s

(4) Draw a suitable figure and divide that into 8 equal parts. Colour 3 parts of it.

(5) Write 2 equivalent fractions for $\frac{3}{5}$

(6) Insert > or < appropriately. $\frac{5}{9}$ _____ $\frac{2}{3}$

(7) Which fraction is the greatest? $\frac{13}{18}, \frac{5}{6}, \frac{2}{3}$

(8) Which fraction is the lowest? $\frac{7}{12}, \frac{2}{3}, \frac{2}{4}$

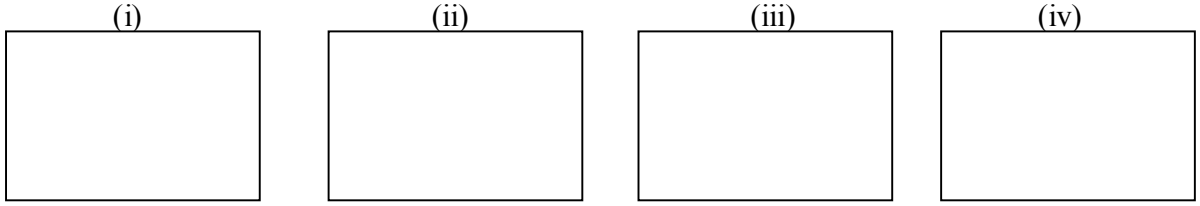
(9) Simplify $\frac{1}{4}+\frac{3}{5}$

(10) Simplify $\frac{5}{6}-\frac{2}{3}$

Part II

(1) Draw 4 rectangles of length 5 squares and breadth 3 squares to illustrate the following fractions. Colour the relevant portion to denote each fraction.

(i) $\frac{1}{2}$ (ii) $\frac{1}{3}$ (iii) $\frac{2}{5}$ (iv) $\frac{3}{4}$



(2) i) Write the denominator and numerator of $\frac{3}{5}$

ii) Write the fraction with denominator 7 and numerator 4.

(3) Write two equivalent fractions for each of the fractions given below.

i) $\frac{2}{7}$ ii) $\frac{4}{5}$ iii) $\frac{8}{12}$ iv) $\frac{10}{15}$

(4) Fill in the blanks by inserting one of the symbols $<$, $>$ or $=$ appropriately.

i) $\frac{3}{7}$ ..... $\frac{5}{7}$ ii) $\frac{10}{15}$ ..... $\frac{6}{15}$ iii) $\frac{7}{9}$ ..... $\frac{5}{9}$

iv) $\frac{3}{4}$ ..... $\frac{6}{8}$ v) $\frac{4}{9}$ ..... $\frac{4}{5}$ vi) $\frac{7}{10}$ ..... $\frac{7}{12}$

vii) $\frac{2}{10}$ ..... $\frac{1}{5}$ viii) $\frac{7}{18}$ ..... $\frac{2}{3}$

(5) Simplify.

i) $\frac{3}{5}+\frac{1}{5}$ ii) $\frac{4}{7}+\frac{2}{7}$ iii) $\frac{1}{4}+\frac{3}{4}$ iv) $\frac{1}{9}+\frac{2}{9}+\frac{3}{9}$

v) $\frac{9}{10}-\frac{3}{10}$ vi) $\frac{5}{8}-\frac{2}{8}$ vii) $\frac{10}{13}-\frac{4}{13}$ viii) $\frac{8}{15}+\frac{3}{15}-\frac{7}{15}$

ix) $\frac{1}{4}+\frac{3}{8}$ x) $\frac{2}{7}+\frac{10}{21}$ xi) $\frac{1}{2}+\frac{3}{16}$ xii) $\frac{11}{30}+\frac{1}{3}$

xiii) $\frac{19}{20}-\frac{2}{5}$ xiv) $\frac{4}{5}-\frac{4}{10}$ xv) $\frac{1}{2}-\frac{5}{12}$ xvi) $\frac{3}{4}-\frac{7}{12}$

(6) i) Write the fractions $\frac{1}{2},\frac{1}{3},\frac{5}{6}$ and $\frac{7}{12}$ in ascending order.

ii) Write the fractions $\frac{8}{15},\frac{11}{15},\frac{2}{3}$ and $\frac{3}{5}$ in descending order.

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Grade 6 | Mathematics | **Unit : 10 – Selection**

- **Answer all questions.**

Part I

(1) Write the numbers between 0 and 11.

(2) Separate the numbers between 0 and 11, into two groups.

(3) Propose a suitable name for each group.

(4) Write multiples of 6 between 60 and 100.

(5) Identify 12 trees in your region and write the names of them.

(6) Separate them into 2 or 3 groups based on the common characteristics.

(7) Propose a suitable name for each group.

(8) Write the names of three districts in the western province.

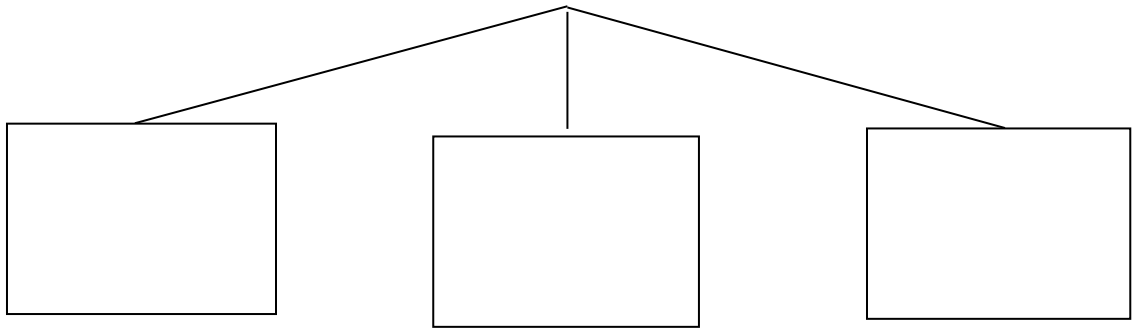
(9) Which name is used to denote the numbers have only two distinct factors.

(10) Write five numbers which have only two distinct factors.

Part II

(1) Separate the following numbers into three groups and write a suitable name for each group.

0.5	6	2	0.6	$\frac{4}{7}$	1.7
8	3.2	$\frac{2}{3}$	3	$\frac{1}{6}$	$\frac{7}{8}$



…… …… ……..

(2) Separate the numbers between 1 – 50 into two groups as multiples of 10 and multiples of 7.

(3) Create two groups as angles and shapes using diagrams.

(4) Separate the give numbers into two groups and give a suitable name to each group.

2	19	11	17	1	4	15
8	18	7	24	10	5	6

(5) Group the following into suitable groups and name them.

Sinhala	Sister	Science
Father	English	Mother
Mathematics		Brother

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Grade 6 | Mathematics | **Unit : 11 - Factors and Multiples**

- **Answer all questions.**

Part I

(1) Express 18 as a product of two numbers.

(2) Write the first two multiples of 7.

(3) Write two multiples of 3 greater than 20.

(4) How can you identify whether a given number is divisible by 10.

(5) A multiple of 5 is given below. Write a suitable number to fill in the blank cage.

2 0 2 ☐

(6) Write 2 multiples of 6 less than 30.

(7) Which number has only two distinct factors.

31, 48, 27, 51, 39

(8) Write two numbers which are multiples of both 3 and 5.

(9) Choose the numbers which are divisible by 2.

527, 2 644, 43 016, 12 485

(10) How can you identify whether a given number is divisible by 5.

Part II

1. Write the factors of the following numbers.

   i) 20 ii) 9 iii) 45 iv) 60

2. Find the factors of 72 using the method of division.

3. Write all the multiples of 10 and 3 between 1 and 50.

4. 60 is a multiple of several numbers. Write them.

5. i) 9 is a factor of 45.
   ii) 7 is a factor of 45. Explain the two statements with reasons.

6. 9^{th} multiple of 2 is a multiple of 3 too. Which multiple of 3 is that?

7. 400g of rice needed to prepare meals for a person for a day.
   i) Find the amount of rice needed for a person for a week.
   ii) Find the amount of rice needed for a person for a month.

8. Fill in the blanks.
   $88 = 11 \times 8$
   i) 88 is a multiple of ……..
   ii) 88 is a multiple of ……..

9. Write all the possible ways of writing 32, as a product of two whole numbers.

10. What is the largest multiple of 12 which is less than 150.

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Grade 6 | Mathematics | **Unit : 12 - Rectilinear Plane Figures.**

- Answer all questions.

Part I

(1) Draw a straight line segment.

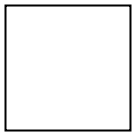
(2) Draw a curved line segment.

(3) What are the elements of a rectilinear plane figure?

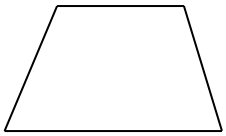
(4) Draw a triangle and mark its elements.

(5) Mention the quadrilaterals in which all the angles are right angles.

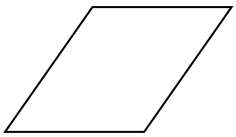
(6) Name the quadrilaterals given below.

i) 

ii) 

iii) 

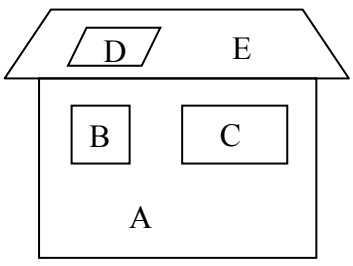
iv) 

v) 

Part II

(1) i) Mention two properties of a square.

ii) Name the quadrilaterals in the following figure.



A –

B –

C –

D –

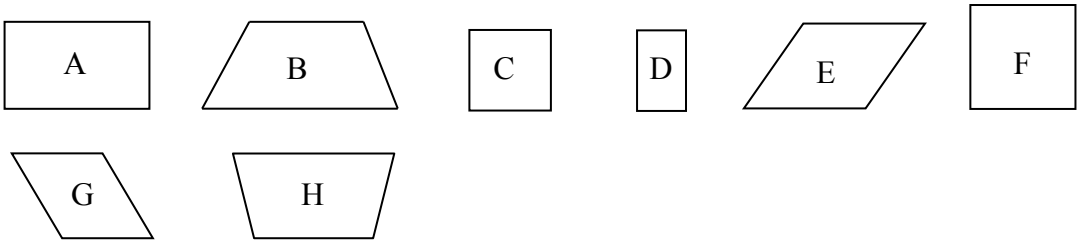
E –

(2) i) Draw a quadrilateral and mark its elements.

ii) Create a design on a square ruled paper using the above types of quadrilaterals.

(3) i) Draw a closed plane figure and an open figure.

ii) Identify each of the following quadrilaterals and separate them.



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Grade 6 | Mathematics | **Unit : 13 - Decimals**

(1) Write in words.

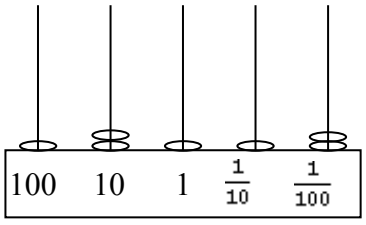
i) 0.28 ii) 56.5

(2) Write each fraction below, using decimal places.

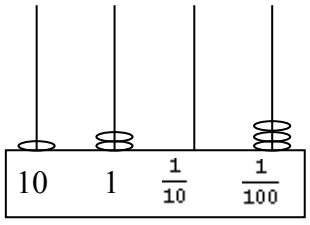
i) $\frac{7}{10}$ ii) $\frac{38}{100}$

(3) Write the value represented by each abacus below.

i)



ii)



(4) Arrange the following numbers in ascending order.

i) 0.7, 0.69, 0.93, 0.78

ii) 12.59, 20.07, 12.95, 20.75

(5) For the each pair of decimals below, fill in the blanks using one of the symbols <, > or =.

i) 0.7 ……. 0.9

ii) 0.8 ……. 0.80

iii) 0.08 ……. 0.06

iv) 1.8 ……. 2.6

Part II

(1) Complete the following table.

Number	Digit	Name of the position of the digit	Value represented by the digit
1.75	7		
82.34	2		
7.86	6		
57.0	5		
9.03	0		

(2) Simplify.

i) $0.8 + 0.3$

ii) $0.72 + 0.23$

iii) $5.32 + 1.84$

iv) $3.25 + 6.98$

v) Sisira went a distance of 1.84 *km* on his bicycle. He walked the rest of the journey 0.78 *km*. What is the total distance he travelled?

(3) Simplify.

i) $0.9 - 0.6 =$ _____

ii) $3.7 - 2.9 =$ _____

iii) $9.67 - 2.41 =$ _____

iv) $15.06 - 0.73 =$ _____

v) Waruna and Amara inherited 0.65 of the land by their mother. If Waruna inherited 0.37 of the land, how much of the land did Amara inherit?

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Grade 6 | Mathematics | **Unit : 14 – Types of Numbers and Number Patterns.**

- Answer all the questions.

Part I

(1) What is the smallest prime number?

(2) What are known as composite numbers?

(3) What is the only even prime number?

(4) Is one a prime number? Give reasons.

(5) Find the 12^{th} square number.

(6) The sum of two square numbers is 34. Find the two square numbers.

(7) Find the triangular number which is a prime number too?

(8) Find the 6^{th} triangular number?

(9) Write two successive composite numbers.

(10) Write 21 as a product of two prime numbers.

Part II

(1) State whether the answer of each of following expressions is even or odd without solving.

i) 12 + 18 ……

ii) 79 – 33 ……

iii) 40 – 15 ……

iv) 54 × 16 ……

v) 3×9 ……

(2) i) Write the odd numbers between 10 and 25.

ii) Draw circles around the even number and draw squares around the odd numbers.

254 193 452 277 381 578

iii) Write 3 even numbers and 3 odd numbers that can be written using the digits 8, 7, 3, and 0 exactly once.

(3) i) What are known as square numbers.

ii) Write the square numbers less than 20.

iii) Write the composite numbers from 20 to 30.

iv) The sum of two consecutive triangular numbers gives a square number. Write an example to prove this.

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Grade 6 | Mathematics | **Unit : 15 – Length**

- Answer all the questions.

Part I

(1) Name two instruments that can be used to measure length.

(2) Draw a straight line segment of 5 cm.

(3) How many metres are there for one kilometre?

(4) Height of a door should be more than the .....

(5) Write two examples for situations where information is used for height.

(6) How many centimetres are there for one metre?

(7) Measure and write the thickness of a Rs. 5 coin.

(8) Measure the length of the following straight line.

_____

(9) Add

m	cm
8	75
+ 3	35

(10) Subtract.

	m	cm
	7	790
–	4	860

Part II

(1) Write the suitable measuring unit for each of the following instance.

i) Length of a tablet

ii) Depth of a well

iii) Distance from Colombo to Kandy

iv) Length of a pencil

v) Height of a cupboard

[millimetres (mm), centimetres (cm), metres (m), kilometres (km)]

(2) Fill in the blanks.

i) 7 cm = …….. mm

ii) 500 cm = …….. m

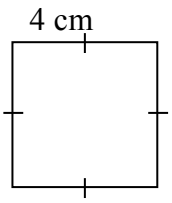
iii) 2000 m = …….. km

iv) 8 m = …….. cm

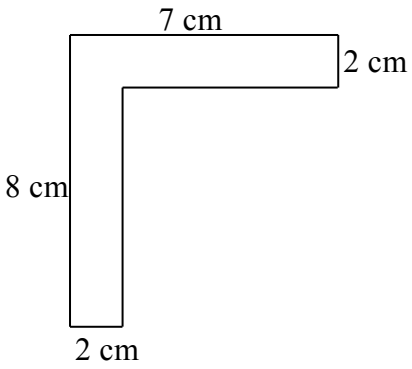
v) 15 mm = …….. cm

(3) Find the perimeter of each of the figures below.

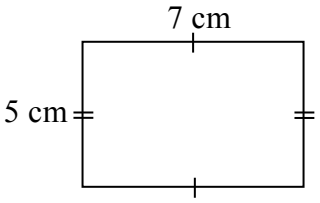
i)



ii)



iii)



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Grade 6 | Mathematics | **Unit : 16 – Liquid Measurement**

Part I

1) Mention two units that can be used to measure liquid.
2) How many millilitres are there for one litre?
3) Write 2 examples for instances where mililitres are used to measure liquids.
4) Write 2 examples for instances where litres are used to measure liquids.
5) What is the capacity of a bottle in millilitres?

Fill in the blanks.

6)	Litres	Litres and millilitres	millilitres
7)	$2\frac{1}{4}\ l$		
8)	$1.5\ l$		
9)		$3\ l$ 700 ml	
10)		$5\ l$ 250 ml	
11)			6 575 ml

Part II

1) Complete the following providing the most suitable unit (litres or millilitres) to measure the quantity given in each situation.
   i) Amount of water can be held in the palm .....
   ii) Household water consumption .....
   iii) Quantity of water drunk after dinner .....
   iv) Quantity of water required to have a bath .....
   v) Quantity of medicine in a syringe .....

2) Simplify.

(i)

ml
350
+ 270

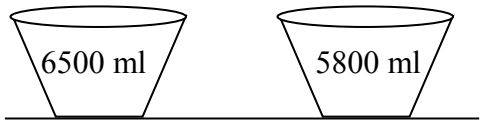
(ii)

ml
809
+ 350

(iii)

l	ml
5	627
+ 2	750

(iv)



a) What is the total quantity of liquids in both vessels in milllitres

b) Write the above answer in litres and millilitres.

3) Simplify.

(i)	(ii)	(iii)
ml	l ml	*l* ml
580	3 809	14 109
– 265	– 2 750	– 6 250

(iv)

If the two small vessels are filled with the liquid in the large vessel, find the quantity of liquid remain in the large vessel.

Prepared by Ms. T. R. N. Niwanthie

Grade 6 | Mathematics | Unit : 17 - Solids

- Answer all questions.

Part I

1. Name two objects which take the shape of a cube.
2. Write the number of edges and the number of vertices of a cube.
3. Name two objects that you can observe in your environment which take the shape of a cuboid.
4. What is known as a solid object?
5. Write the number of edges and faces of a regular tetrahedron.
6. Write the number of faces of a cuboid.
7. Write one property of a trapezium.

- Write down solids in which each of the following rectilinear plane figures can be observed.

8. Rectangle
9. Square
10. Triangle

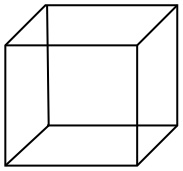
Part II

(1) 1& Draw a suitable net to prepare a cube of side length 4cm.

2& A compound solid is made by placing the cube in the figure on an identical cube, such that two of the faces coincide and then pasting them together.

i) What is the name of the solid that is made?

ii) Write down the measurements of the solid.



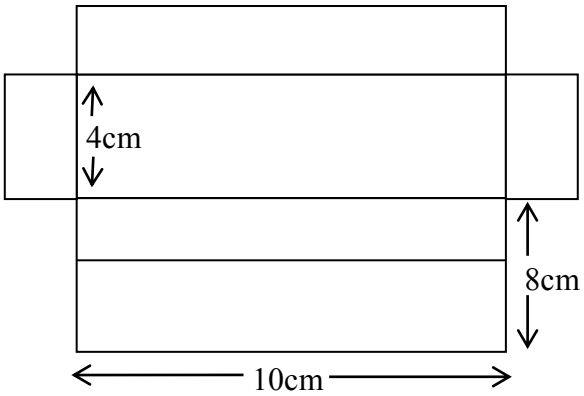
3cm

(2) 1& Draw a net to make a box having the shape of a cuboid'

2& Write down the number of edges and the number of vertices of a cuboid'

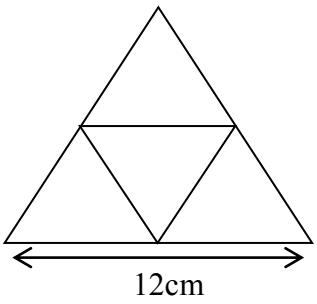
3& Write down the length, breadth and height of the cuboid that can be made with the net of the figure'

4& Write down two properties of cuboid'



(3) i) a) What is the shape of face of a regular tetrahedron?

b) What is the length of an edge of the model of a regular tetrahedron that can be made using the net given in the figure?



ii) A solid has been made by placing two identical regular tetrahedrons together, such that two of their faces coincide and then pasting these two faces together. For this compound solid, write down

a) the number of faces

b) the number of edges

c) the number of vertices

iii) Draw a suitable net to create a model of a regular tetrahedron with edges of length 6 cm.

Grade 6 | Mathematics | **Unit : 18 – Algebraic Symbols**

- **Answer all questions.**

Part I

1) Which of the following expressions state a known constant?
   i) The number of days in a week
   ii) The number of books in a bag
   iii) The number of words you learnt
   iv) The number of minutes in an hour

2) Underline the correct answer.
   The number of players in an elle team ..... (is/is not) a known constant.
3) Write four mathematical operations that you know.
4) The number of sides of a square can be denoted using an algebraic symbol. Is that a constant or a variable?

- Denote each of the expressions given below using suitable algebraic symbols.

5) The number of coconuts plucked from a coconut tree
6) The price of a school bag
7) The length around a playground
8) The number of students in a class
9) The price of a television
10) The number of passengers travelled in a bus

Part II

1) Write down 5 expressions which state a constant value.
2) Write down 5 expressions which state a variable.
3) Write down whether each of the following is a constant value or a variable.
   i. The daily rainfall
   ii. The number of right angles in a rectangle
   iii. The number of days in January
   iv. The length around a playground
   v. The number of words in a particular page of a book
   vi. The number of players in a volleyball team
   vii. The number of colours in a rainbow
   viii. The number of minutes in an hour
   ix. The breadth of a dining table

x. The price of a coconut.

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Grade 6 | Mathematics | **Unit : 19 – Constructing Algebraic Expressions and Substitution**

Part I

1) Construct expressions using digits and symbols.
   i) Add seven and five
   ii) Subtract four from nine

2) Write in words. 7 – 2

3) Construct expressions using symbols.
   When two is added to eight, the answer is ten.

4) Fill in the cages.
   i) 3 + ☐ = 10 ii) ☐ – 8 = 3

5) When x = 8, find the value of x + 3

6) When y = 12, find the value of y – 5

7) The first term is y and the second term is 7.
   i) Add the two terms
   ii) Subtract the second term from the first term

8) Draw five symbols you know.

9) Write as a statement. a + 15

10) Write five algebraic symbols.

Part II

1) Construct expressions for the following.
   i) Subtract three from eight and add two. …….
   ii) I have Rs. x and gave Rs. 8 to my brother. Amount left with me is .....
   iii) The sum of two numbers is 18. One number is y and find the other number. ……..
   iv) Number of students in one class is x. In the other class it is 23. Find the total number of students in both classes. ……..
   v) A number is denoted by m. The number 12 greater than m. …….

2) Find the value of the following when x = 12

i) $x + 5$

ii) $x - 6$

iii) $20 - x$

iv) $x + 4$

v) $2x$

3) Complete the following using +, − or relevant digits.

3		8	→	11
	+		→	6
↓				
2			→	5

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Grade 6 | Mathematics | **Unit : 20 – Mass**

- Answer all questions.

Part I

- Express in kilogrammes.
  1) 3605g
  2) 750 g
  3) 1 kg 755 g
  4) Express in kilogrammes and grammes. 2.5 kg
  5) Express in grammes. 1.25 kg
  6) Fill in the blanks.

  100g = $\frac{1}{10}$ kg = 0.1kg

  200g = ... kg = ... kg

  500g = ... kg = ... kg?

7) How many 500g amounts in 1kg?
   - Fill in the blanks.
8) 1 kg = ... g × 4 = 500 g × ..... = ... g × 8 = 100g × .....
9) 6075 g = ... kg ..... g = ... kg
10) 10 050 g = ... kg ..... g

Part II

1) Simplify.
   i) 575 g + 350 g
   ii) 3 kg 750 g + 2 kg 650 g
   iii) 5kg – 2 kg 675 g
   iv) 5.75kg – 3.657 kg
   v) Fill in the blanks.

   ..... g = $\frac{1}{1000}$ kg = 0.001 .....

2) Price list

A packet of milk

Powder (100) – Rs. 54.00

A bar of soap – Rs. 65.00

A packet of margarine – Rs. 105.00

100g of tea leaves – Rs. 60.00

Find the total cost of the following items according to the above price list.

1kg of milk powder

2 bars of soap

A packet of margarine

90 g of tea leaves.

3) Simplify

i)

kg	g
+ 2	805
3	745

ii)

kg	g
+ 4	250
3	765

iii)

kg	g
– 4	265
1	780

iv)

kg	g
– 13	875
6	992

v) 4 kg 60 g + 7 kg 997 g = ... kg .....g

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Grade 6 | Mathematics | **Unit : 21 – Ratio**

Part I

- **Answer all questions.**

(1) Write down how you read the following ratios.
i) 1 : 5 ii) 5 : 9

(2) Write in symbolic form. The ratio three to one.

(3) The length and width of a rectangular room is 12 m and 7 m respectively. Find the ratio of the width to the length.

(4) What are the terms of the ratio. 12 : 7

(5) Write 2 equivalent ratios. 4 : 7

(6) Write in its simplest form. 15 : 9

(7) Write the ratio of 25 cents to one rupee.

(8) 500g of sugar and 1 kg of flour are mixed to make a mixture of food. Find the ratio of the sugar to the flour.

(9) The price of 3 books is Rs. 18. Find the price of 6 books.

(10) Find the ratio of 500g to the $1\frac{1}{2}$ kg. Write it in its simplest form.

Part II

(1) The distance from my home to school is 1 km 250m.
The distance from Mala's house to school is $\frac{1}{2}$ km. Write the ratio of the distance from my home to school to the distance from Mala's house to school in its simplest form.

(2) If the price of 5 eggs is Rs. 105, what is the price of 8 such eggs?

(3) Select the statements that denote a ratio.
i) My weight is half as my father's weight.
ii) Sunil has got less marks than Malith for Mathematics.
iii) My brother is older than my sister.
iv) To make a cake 250g of sugar and 500g of flour are needed.
v) There are 3 blue flags and one yellow flag.

(4) For each ratio given below, Write down 2 equivalent ratios.
i) 8 : 4 ii) 15 : 9

(5) Write each of the ratios given below in its simplest form.
i) 56 : 21 ii) 60 : 150

Grade 6 | Mathematics | **Unit : 22 – Data Collection and Representation**

- Answer all questions.

(1) The number of vehicles that arrive on a normal day during an hour is given below.

Type of vehicle	Tally marks	No. of vehicles
Van	𝍸 ///	8
Lorry	///	……
Car	𝍸 𝍸 ///	……
Bus	……	13
Bicycle	……	5
Other	𝍸 ///	……

i) Copy the above table and fill in the blanks.

ii) Which type of vehicle arrives most?

iii) Which type of vehicle arrives least?

iv) Find the total number of vehicles arrive during the hour.

(2) The number of students that attended during a week is given in the following table. Draw a picture graph to represent the number of students using a suitable symbol.

Day	No. of students
Monday	36
Tuesday	40
Wednesday	44
Thursday	32
Friday	28

(3) The length of the shoes taken from 40 students is given below.

20	21	20	21	22	23	20	24	23	21
21	20	21	24	21	21	25	21	23	23
22	21	23	25	22	24	21	22	22	21
22	21	22	24	20	21	24	21	21	24

Include the above data in the following table.

Length of a shoe (cm)	Tally marks	Number
20		
21		
22		
23		
24		
25		

(4) Draw a picture graph to represent the following data.

Fruits	Number
Pineapples	80
Mangoes	75
Wood apples	85
Grapes	60
Papaws	70

(5) Answer the following questions using the picture graph.

Monday	◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯
Tuesday	◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯
Wednesday	◯ ◯ ◯ ◯
Thursday	◯ ◯ ◯ ◯ ◯ ◯ ◯
Friday	◯ ◯ ◯ ◯ ◯ ◯ ◯ ◯

100 bottles of jam are represented by the symbol ◯ .

i) How many bottles of jam were produced on Monday?

ii) When is the least number of bottles of jam were produced?

iii) What is the total number of bottles of jam were produced?

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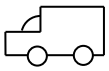
Grade 6 | Mathematics | **Unit : 23 – Data Interpretation**

- Answer all questions.

(1) Draw a picture to represent the following data that can be used in picture graphs.

Eg :- Vehicles 

i) Soft drink bottles …….
ii) Trees …….
iii) Houses …….
iv) Passengers …….
v) Birds …….

(2) Represent the following data in a picture graph.

Type of food	No. of students who preferred them
Bread	5
String hoppers	7
Pittu	6
Rice	4
Hoppers	3

(3) The daily income of a shop within a certain week in given in the following table.

Day	Income (Rs)
Monday	1 500
Tuesday	3 000
Wednesday	2 750
Thursday	1 500
Friday	2 250

Denote Rs. 500 by  and represent this data in a picture graph.

Answer the following questions using the picture graph.

i) How many symbols should be drawn to represent the income on Wednesday.

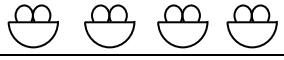
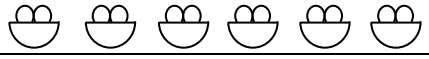
ii) Show the way you draw them.

(4) The data on the vehicles that joined a highway during a certain period of time through a certain entry point is represented in the following table.

Type of vehicle	Number
Car	7
Bus	9
Van	13
Lorry	4
Other	6

Represent the above data in a picture graph.

(5) The number of soft drink bottles produced during the first five months of the year is given below. Answer the following questions using the picture graph.

January	
February	
March	
April	
May	

1000 bottles are represented by the symbol 

i) How many bottles were produced during the month March?

ii) In which month was the most number of drink bottles were produced?

iii) Find the total production of the soft drink bottles.

iv) How many more bottles were produced in March than in February?

Prepared by Ms. T. R. N. Niwanthie

Grade 6 | Mathematics | Unit : 24 - Indices

- Answer all questions.

1. Complete the following table.

Index / Base	$(\ )^2$	$(\ )^2$	$(\ )^2$	$(\ )^2$	$(\ )^2$	$(\ )^2$	$(\ )^2$	$(\ )^2$
2								
3								
4								
5								
6								
7								
8								
9								
10								

2. i) What is four times three equal to?
   ii) What is four to the power three equal to?
   iii) Find the difference of the above two answers.
   iv) Write two suitable numbers to fill in the following cages.

$$\square^{\square} = 4$$
$$2$$

3. i) What is twelve times three equal to?
   ii) What is twelve to the power three equal to?

4. Fill in the blanks.
   i) $(\ldots\ldots^2) + (\ldots\ldots^2) = 35$ ii) $(\ldots\ldots^2) + (\ldots\ldots^2) = 41$

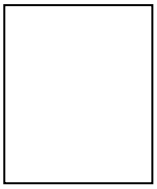
5. i) Express 72 as a product of prime numbers.
   ii) Write it in index notation.

6. Find the value. $2^4 \times 5^2$

Grade 6 | Mathematics | Unit : 25 - Area

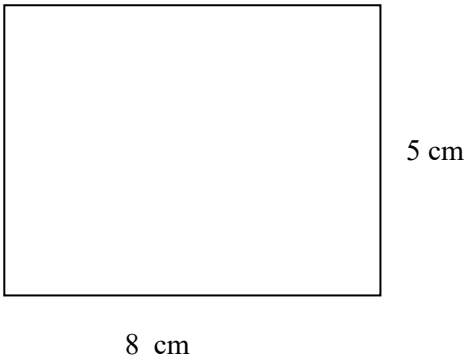
- Answer all questions.

1) Find the area of the following figure.



2) The length of a square is 6 cm. Find the area of the square.

3) Find the area of the following figure.



4) The length of a rectangular play ground is 250m and the breadth is 150m. Find the area of the play ground.

5) The area of a rectangle is 60 cm^2. If the length of the rectangle is 12cm, find the breadth.