ගණිතය **- I, II**	
Mathematics **- I, II**	Duration :- **1** hour 30 minutes

Name :- .... Index No :-
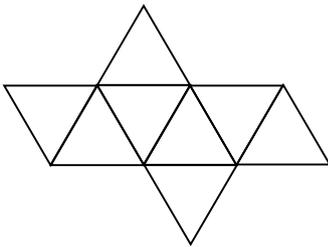
Grade 8

Part I

- **Answer for all the questions.**

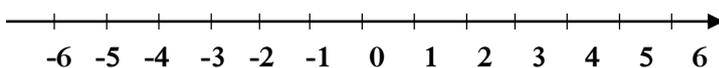(01)   36 is a square number which square number is it?

(02)   Which Solid can be made, using given net

(03)   Solve the equation 3m + 5 = 23

(04)   Find the Value of (+8) + (-3)

(05)   Find the value using a number line (-3) – (+5)

(06) Find the Value of (-32) ÷ (+4)

(07) Which triangular number is $\frac{15 \times 16}{2}$ represented by the triangular number pattern Starting form 1

(08) Write all the perfect square number between 50 and 100

(09) Simplify (4a) x (3b)

(10) Find the value of
3 + 7 x 5

(11) Find the HCF of 3a, 6ab , 15 bc
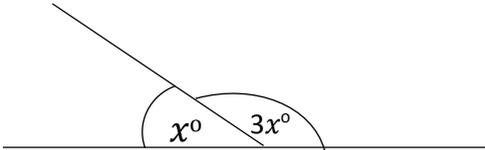
(12) Write the number 64 in index notation with base 4

(13) Write expression 3x + 6 xy as a product of its two factors.

(14) Find the value of 2.45 + 3.7

(15) Find the value of x^o

(16) Express $(2m)^3$ as a product of powers

(17) Find the value of 0.075x 100

(18) Add 25t 435 kg and 8t 53 kg

(19) Find the value of $\sqrt{324}$ using prime factors.

(20) Fill in the cage using <, = > symbols

$(-2)^4$ ☐ $(-2)^5$

Part II

- **Answer only 5 questions. (12 marks each)**

(01)

(a) In the number pattern 4,8,12,16,……………

(i) Write next two terms

(ii) Write the general terms of the above number pattern

(iii) What is the 12th term

(iv) Which term is 200

(b) In the number pattern 1,2,3,4,5……………. Of the natural numbers

(i) Write the general term of the above number pattern.

(ii) Copy the below number pattern in your answer sheet and fill in the blanks

$$1 = ……………$$
$$1+2 = ……………$$
$$1+2+3 = ……………$$
$$1+2+3+4 = ……………$$

(iii) Get the number pattern when adding the numbers of the part (ii) write it as infinit number pattern

(iv) What is the name used for this type of number.

(02)

(a) Figure shows a squae shped fram It is made by bending a wire.
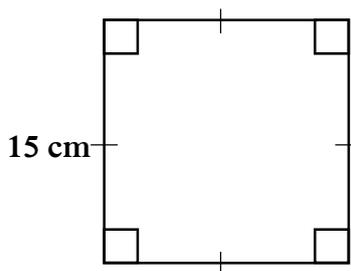
(i)   Find the perimeter of the given square

(ii)   Later build an equilateral triangular fram from the same length of above wire used. Find the side length of the equilateral triangle and draw it

(b)
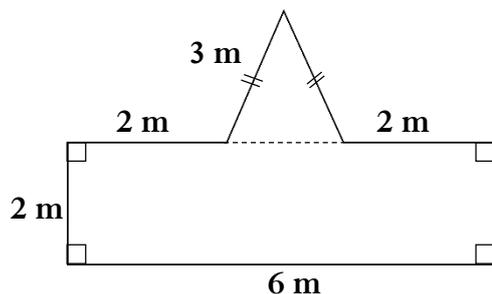
Above figure show a flower bed in the garden, red flowers grow in the triangle shape area and yellow flowers grow in the rectangle shape area.

(i)   Find the Perimeter of the triangular shape red coloured flower bed

(ii) Find the Perimeter of the triangular shape yellow coloured flower bed

(iii) A worker walked only around the flower bed for watering at once per day. Calculate the total distance he walked
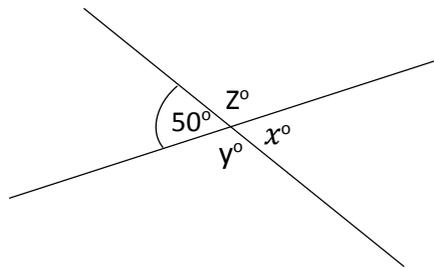
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(03)
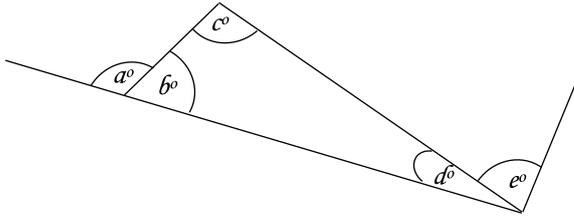
(a) From above figure

(i) Write two pair of adjacent angles

(ii) Write a pair of supplementary angles

(iii) If $d^o = 32^o$, d and e^o angles are complementary angles, Find the Value of e^o

(b)

(i) Find the magnitude of x^o, y^o, and z^o anyles of the above figure.

(ii) Write the relationship between 50°, x^o, y^o and z^o

(04)

    (a) Write the addative inverse of the given numbers.

       (i)   (5)

       (ii)   (-2.5)

    (b) Find the value with using addative invers

       (i)   (-5) – (-2)

       (ii)   (+3) – (+7)

       (iii)   (+5) + (-2) – (-8)

    (c) Simplify

       (i)   (-5) x (+4)

       (ii) $\dfrac{(-3) \text{ x } (-8)}{(+6)}$

(05)   (a)

Distributing 10 parcels of presents each has one mathematical instrument box, two exercise books and 3 pens among the best students of those who are selected as the best one of the school grade 8 '' Do you know contests''

The Price of the mathematical instruments is Rs. a Price of a book is Rs. b and price of the pen is Rs. c

(i)   Write an algebraic expression for the total Price of a one parcel.

(ii)   Write an expression and simplify it for represent the total expenditure of the 10 parcels

(b)

(i) Simplify

       5(+ 2y) +3 $(x – 2y)$

(iii)   If $x = 2$, y = 1, z = (-1) Find the value of $3x + 2y – z$

(06)   (a) A solid object has regular pentagonal faces.
         (i)   Find the number of vertices
         (ii)   Find the number of edges
         (iii)   The numbers of faces there

       (b) What is the name of this solid.

       (c) (i)   Write the Eilev's velationship to be used to be solid with straight edge

            (ii) If a certain solid has 9 , faces and 16 edges and If Eulars's relationship is satisfied. Find the number of verticers it has

            (iii) How many Planotonic Solids?

            (iv) Write three Special features of the Planotonic Solids.