

**Nivithigala Education Division**

**Third Term Test**

**Mathematics**

**Grade – 08**

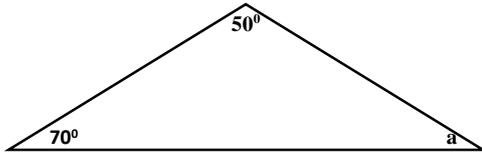
**Time 2 Hours**

**Part - I**

**Answer All Questions. Two marks for each.**

- 1) The general term of a number pattern is  $2n-1$ . What is the 25<sup>th</sup> Term
- 2) Calculate the complement of  $61^\circ$
- 3) Find the value of following by using the number line.  
 $(-2) + (+4)$
- 4) Simplify  $3(a + b - 6c)$
- 5) Name two platonic solids.
- 6) The area of a square shape class room is  $400 \text{ m}^2$ . Find the side length of the class room.
- 7) Find the order of rotational symmetry of square.

8) Find the value of “ a “



9) Represent the following Improper fraction as a mixed number.

$$\frac{8}{5}$$

10) Write two equivalent ratios for following ratio.

$$7: 8$$

11) Solve the following equation.

$$2x - 2 = 7$$

12) Fill in the blanks with  $\in$  or  $\notin$  as appropriate.

(I) 13 ..... { prime numbers }

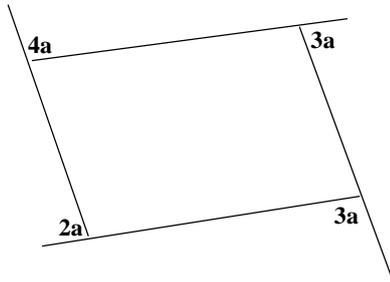
(II) 36 ..... { Triangular numbers }

13) Find the time in Bangkok , when the Greenwich time is 7.00 a.m. (Time zone of Bangkok is +7)

14) Could a triangle is construct with line segments 6 cm, 7 cm, 5 cm. Give reasons.

15) Draw a circle and represent the diameter of the circle.

16) Find the value of “ a “



17) Represent the following inequality on a number line.

$$-1 < x \leq 4$$

18) Find the mean of following values.

8, 25, 30, 30, 7

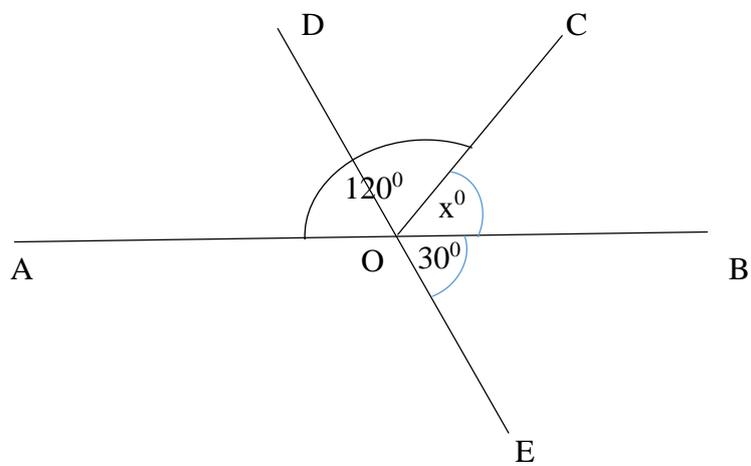
19) The length of a flower bed is 5m. If the scale of this diagram is 1: 200, find the length in the scale diagram.

20) An unbiased die with its faces marked from 1 – 6 is rolled. Find the probability of an even number showing up.

Part - 02

Answer only five questions.

1) (a)



- (I) Find the value of "x". (1 marks)
- (II) Find the value of angle  $\hat{AOD}$  with reasons. (2 marks)
- (III) Name a right angle. (1 marks)
- (IV) Name a pair of complementary angles. (1 marks)
- (V) Name a pair of supplementary angles. (1 marks)
- (b) (I) constructs a circle with the radius 6 cm. (1 marks)
- (II) Draw the longest chord and measure the length of it. (2 marks)
- (III) Write the relationship between the radius and the longest chord. (1 marks)
- (IV) Draw a circle and name the major segment and minor segment. (2 marks)
- 2) (a)
- (I) Find the value of  $(+2) - (-4)$  by using the number line. (2 marks)
- (II) Find the value of  $(-5) - (-8)$  (1 marks)
- (III) A , B and C are three friends. They played a card game. When they playing, A , B and C received  $(-3)$  ,  $(-4)$  ,  $(-6)$  cards respectively. Then A and B multiplied their vaslues and C divided the answer that obtained after multiplication , using his card.Find the value that " C " obtained. (3 marks)
- (b) The price of a book was Rs. a If the price increased by Rs.5,construct algebraic experions for,
- (I) The new price of a book. (1 marks)
- (II) The profit gained from abook with the new price, if the cost of printing a book is Rs.b. (2 marks)
- (III) The profit gained from 10 copies, if Rs. r is spent for the distribution for each copy in addition to the printing cost. (3 marks)

3) (a) Simplify.

(I)  $\frac{3}{8} + \frac{1}{4}$

(1 marks)

(II)  $1\frac{1}{2} \times 2\frac{2}{3} \times 4\frac{1}{2}$

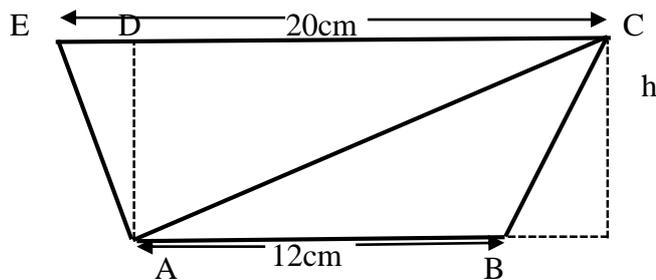
(2 marks)

(III)  $1\frac{3}{8} \div 1\frac{1}{7}$

(2 marks)

(IV) A machine take  $1\frac{1}{2}$  hours to make a cake Find how many cakes it can be made during  $13\frac{1}{2}$  hours.

(3 marks)



The area of the triangle ABC is  $36 \text{ cm}^2$

(I) Find the value of “h “

(2 marks)

(II) Find the area of the triangle ACE

(2 marks)

4) (a) Amal and Nimal started a business at the beginning of a certain year by investing Rs.20,000 and Rs.30,000 respectively. At the end of the year, the profit from the business was Rs. 35,000.find the amount received by each of them.

(6 marks)

(b) Simplify.

(I)  $12b - 8 = 28$

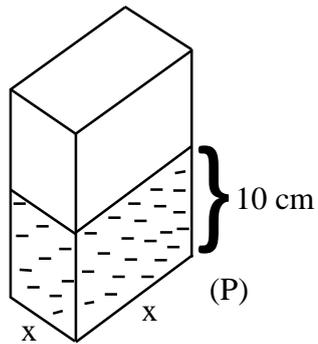
(2 marks)

(II)  $3(x-2) = 9$

(2 marks)

(III)  $\frac{a}{4} + 1 = 5$

5)



(2 marks)

A figure of a tank is shown above.

(I) If the tank is filled with water up to 10cm and it's volume is  $1000 \text{ cm}^3$ , find the side length of the base.

(3 marks)

(II) The volume of water mentioned in (i) problem, put in to another container. If that container completely filled with this water, what is the shape of the container?

(2 marks)

(III) If the height of the container "p" is 20cm. Find the capacity of this container in millilitres.

(3 marks)

(IV) If 11 050 ml were used from the capacity of container "p", find the remain volume.

(2 marks)

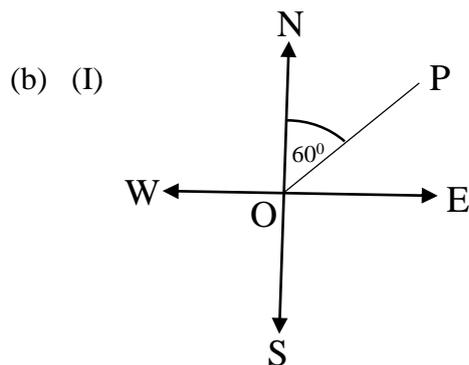
(V) 13l of water have been required for a function. They planned to store this water in above mentioned "p" type containers. Estimate how many containers that required for this purpose.

(2 marks)

6) (a)

04	18	13	43	30
12	25	31	33	22
15	03	19	05	28
30	24	42	40	10

- (I) Represent the above data in stem and leaf diagram. (3 marks)
- (II) Find the mode of this data collection. (1 mark)
- (III) Find the mean of this data collection. (2 marks)
- (IV) Find the median of this data collection. (2 marks)



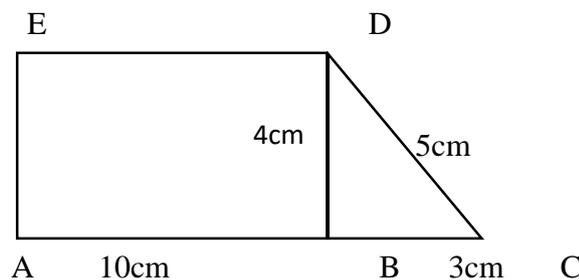
Write down the direction of the "P" as seen from "O" Using the main direction

(2 marks)

(II) Illustrate the location of a place 20 m from "O" in the direction  $40^\circ$  east of north.

(2 marks)

7) (a)



- (I) Calculate the actual lengths of AC, BD and CD (3 marks)
- (II) Calculate the actual perimeter of the figure. (1 marks)

(b) An unbiased tetrahedral die with the numbers 1-4 marked on its four faces was tossed 36 times and the number on the face that landed up was recorded. The results of this experiment are shown below.

Number	Number of times it occurred
1	8
2	9
3	12
4	11

- (I) Find the probability of getting the numbers 3 (2 marks)
- (II) Find the probability of getting a prime number. (2 marks)
- (III) Find the probability of getting a triangular number. (2 marks)
- (IV) Find the probability of getting a number greater than 2. (2 marks)