



# JAFFNA HINDU COLLEGE

## First Term Examination - 2019

Grade - 08

Mathematics

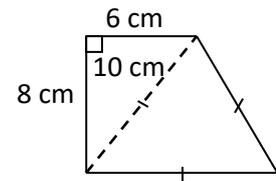
Time : 2.30 Hours

### Part I

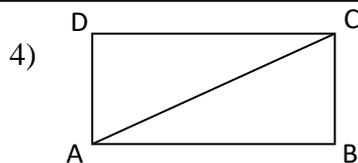
❖ Answer all the questions.

1) Write down the next two terms of 2, 4, 8, 16, ..... , ....

2) Find the perimeter of this figure.



3) The price of five pens is equal to the price of an exercise book. If the price of an exercise book is Rs 60 find the price of a pen.



ABCD is a rectangle. If  $\hat{D}AC = 50^\circ$ , find magnitude of  $\hat{A}CB$ .

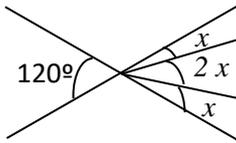
5) Find the H.C.F of 12, 16, 18.

6) Simplify :-  $(-5) + (-1) - (-1)$ .

7) Which triangular number is 1830? (Hint :  $30 \times 61 = 1830$ ).

8) Solve :-  $5x - 1 = 24$

9)



Find the value of  $x$ ?

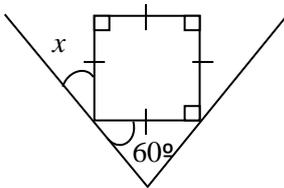
10) If  $a = 5$ ,  $b = 2$  and  $c = (-1)$  find the value of  $8(a-b) - c$ .

11) What is the name of the solid with 30 straight edges and 12 vertices?

12) Find the value of  $\sqrt{2 \times 7 \times 14}$ .

13) Convert 3t 55 kg to metric ton.

14)



Find the magnitude of  $x$ .

15) Evaluate :-  $\sqrt{2\frac{1}{4}}$

16) Remove the bracket and simplify  $3(p - 2) - p$ .

17) Find the sum of odd numbers from 1 to 25.

18) Simplify  $\frac{(+7) \times (-3) \times (-10)}{(-2) \times (+5)}$

19) Factorize :-  $18m + 12k - 6p$

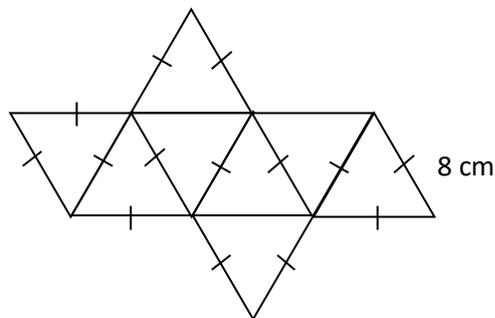
20) Two identical rectangles of length 5 cm and breadth 3 cm joined without over lapping. Find the least value of the perimeter of combined figure.

(2 x 20 = 40 Marks)

**Part II**

❖ Answer the first question and any four from others.

1) a) Answer the following using given net.



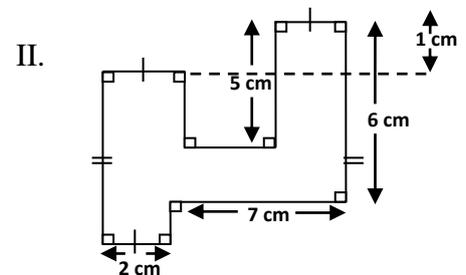
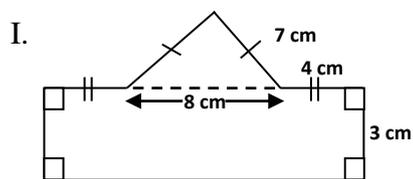
I) Write the name of solid that can be made from this net.

II) Write the number of faces, edges and vertices of the above solid.

Faces ..... Vertices ..... Edges .....

III) Find the perimeter of the net.

b) Find the perimeter of the given figures.



(2+3+3+2+3+3=16 Marks)

2) a) Fill the blanks using  $>$  or  $<$ .

I)  $(-5) \dots\dots\dots (+5)$

II)  $(+2\frac{1}{2}) \dots\dots\dots (-3)$

b) Write in ascending order :

$$0, \left(-\frac{1}{2}\right), 2\frac{2}{5}$$

c) Simplify :-  $\left(+\frac{3}{7}\right) - \left(-\frac{2}{7}\right) - \left(+\frac{1}{7}\right)$

d) Fill the blank cages.

I)  $\frac{(-16)}{\square} = (+8)$

II)  $\frac{\square \times (-2)}{(-14)} = (-1)$

e) I) Simplify :-  $(+7.5) \times (-4) \times (-1)$

II) Simplify :-  $(-2\frac{1}{2}) \times (+3\frac{1}{4}) \times 0 \times (-2\frac{1}{5})$

(2+2+3+2+2=11 Marks)

3) a) Consider the odd number pattern starting from one.

I. Write down the common term.

II. Find the 20<sup>th</sup> term.

III. Which term is 109?

IV. Find the position of the largest odd number less than 200 in this number pattern.

b) Kumar starts to save money from saving one rupee on first day Rs.3 on second day, Rs.5 on the third day and it is continued to buy a book. If he bought the book with the total collection of 20 days, Find the price of the book.

(1+2+2+3+3=11 Marks)

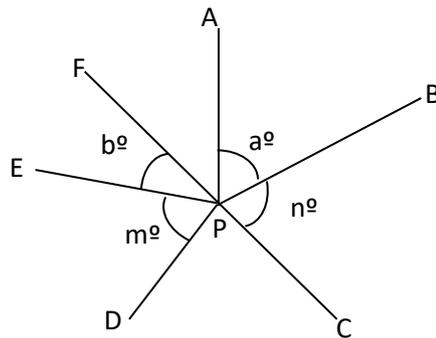
- 4) a) The mass of a motor car is 2t 300 kg and a van is 5t 75 kg.
- Express the mass of motor car in metric ton.
  - Express the total mass of a motor car and a van in metric ton.
  - Calculate the mass of five such vans in metric ton.
- b) The mass of a bag of rice is 10kg and a milk powder packet is 500 g.
- Give the mass of rice received by a person in kg, when a bag of rice divided equally among four person.
  - Find the mass of milk powder needed to deliver four persons, If a person received 3 packet of milk powder.
  - Calculate the total expenditure of a person. If you assume that the price of rice per one kg and a packet of milk powder (400 g) are Rs. 80 and Rs. 315 respectively.

(1+2+2+2+2+2=11Marks)

- 5) a) i) The length and perimeter of a rectangle are  $(4x+3)$  cm and  $(12x + 8)$  cm. Write down an expression for the breadth.
- If the perimeter of the rectangle is 44 cm, construct an equation in  $x$ .
  - Find the value of  $x$  by solving the above equation.
- b) Simplify :-
- $4m(n + 2) - 2(n - 3m)$
  - $2a(a + 3) + a^2 - 2a + 5$
- c) i) Find the H.C.F of  $4a^2b$ ,  $20ab$ ,  $28ab^2$
- Factorize :-  $-5mn - 15m^2 - 10m$

(2+2+2+2+2+1=11 Marks)

6) a) Write down the pair of adjacent angles, denoted by English small alphabets.

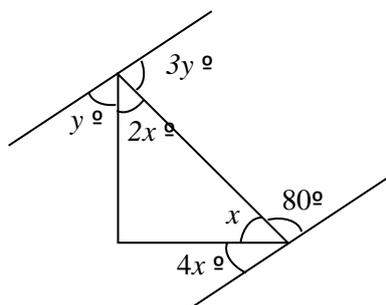


b) Find the magnitude of  $x$ .

i)



ii)



c) i) If  $a$  is a positive integer show that,  $(a^4) > (a^5)$ .

ii)  $(-3)^2, (-1)^7, (-1)^{50}, 2^5$  write in ascending order.

(2+2+2+2+1=11 Marks)