



Second Term Test - 2017

Grade

8

Mathematics

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..... Time: 2hrs

Part I

- Answer all questions in the paper itself.

01. Write next two terms of the number pattern.

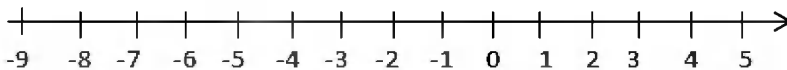
2, 5, 8, 11.....

02. What is the shape of a face of dodecahedron?

03. Simplify, $\frac{3}{8} \times \frac{2}{3}$

04. Express 3800kg in tons and kilograms.

05. Find the value of $(-3) - (+5)$ using given number line.



06. $A = \{\text{Multiples of 25 between 10 and 20}\}$

Write above set with its elements?

07. Separate common factors of $5pq + 10pr$ and write as a product of factors.

08. It is needed $1\frac{1}{4}m$ of cloth for a pillow case. Find the number of pillow cases can be prepared with $12\frac{1}{2}m$ of cloth.

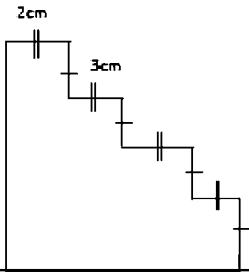
09. What is the time line taken by earth to rotate 15° longitudes from west to East?

10. Simplify, $0.12 \div 0.3$

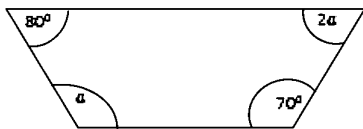
11. The area of a square shape flower bed is $324m^2$. Find the length of a side?

12. The number of bilateral symmetrical axis of a certain figure is 0. The order of rotational Symmetry is 2. What is this plane figure?

13. Find the perimeter of the figure.



14. Find the value of a according to the information in the figure.



15. An amount of Rs. 500 is divided between A and B according to the ratio 3:2. What is the amount received by B.

16. Simplify, $5m - 2n - 3m + 7n$

17. There are 50 students of a class out of them 30% is boys. How many boys are there?

18. Find the surface area of a cube which the length of a side is 4 cm.

19. Solve,

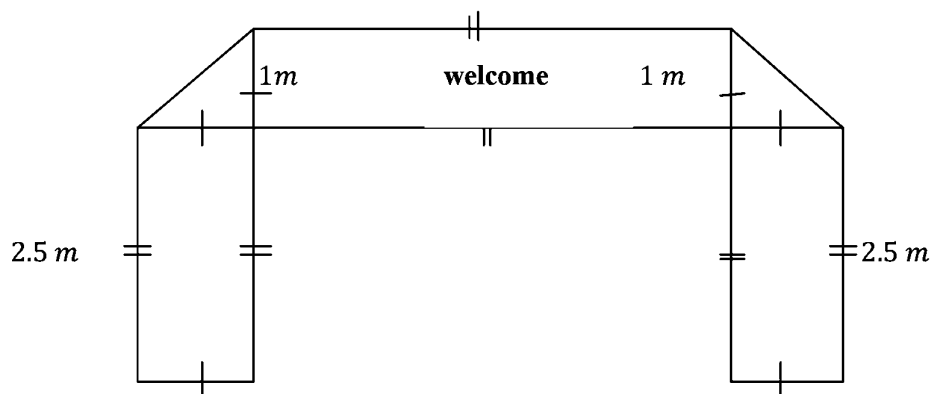
$$\frac{x}{2} + 1 = 5$$

20. Evaluate $(-3)^3$

Part II

- Answer 5 questions including the first question.

01. A rough diagram of a pandol (thorana), prepared by the students of grade 8 of Jayawadanagama , Maha vidyalaya for Mathematics day is given below.



- I. Name two plane figures you see in the diagram. (2 marks)
- II. There is an idea that a ribbon is fixed along the rectangular shape of the part " Welcome" (2 marks)
- III. Except the rectangular part of " Welcome " the other parts are covered by colourful cloths. Find the area of the part which covered by the colourful cloths. (2 marks)
- IV. The price of $1m^2$ of colourful cloths (iii) is Rs 250. Find the total amount spend for cloths. (2 marks)
- V. Platonic solids are to be used to design the thorana. Suggest names of two platonic solids that can be taken. (2 marks)
- VI. Using a platonic solid mentioned by you above, verify that Euler's relation.(3 marks)

02. (a)I. Fill in the blanks.

$$2^2 \times x^2 = (\dots \times \dots)^2 \quad (2 \text{ marks})$$

II. Obtain the value of $(2 \times 5)^2$ (2 marks)

(b) A house wife uses sugar and flour according to the ratio of 3:4 and flour and Thala according to the ratio of 2:1 to prepare Thala Aluwa

I. Find the ratio of sugar, flour and Thala in Thala Aluwa. (3 marks)

II. According to it, find the amount of flour and Thala are to be mixed separately with 600g of sugar (4 marks).

03. A certain institute separate $\frac{1}{4}$ for paying salary, 30% for maintenance and 5% for welfare activities from monthly income.

I. What is the percentage separated for paying salary from monthly income. (2 marks)

II. What is the fraction separated for maintains. Express it in the simplest form. (2 marks)

III. If an amount of Rs. 2 000 000 is separated for welfare activities in the month of January. Find the total income of the month. (3 marks)

IV. Find the amount separated for maintains in January. (3 marks)

V. Express the answer (IV) in words. (1 mark)

04. Ruvini's father is an employee in the city Manila of Philippine.

(a) Philippine in +8 time zone and Sri Lanka is $+5\frac{1}{2}$ time zone. Ruvini calls her father at 7.00p.m

I. What is the time in Manila, when she calls. (2 marks)

II. Write the date and time in Sri Lanka when Ruwini's father calls her at 1.30A.M on 2017.02.05 (3 marks)

(b) I. If the set of multiples of 5 between 20 and 50 is A, Express the set A with elements. (2 marks)

II Find $n(A)$ (2 marks)

III. Express that "8 is not an element of A" in set notation. (2 marks)

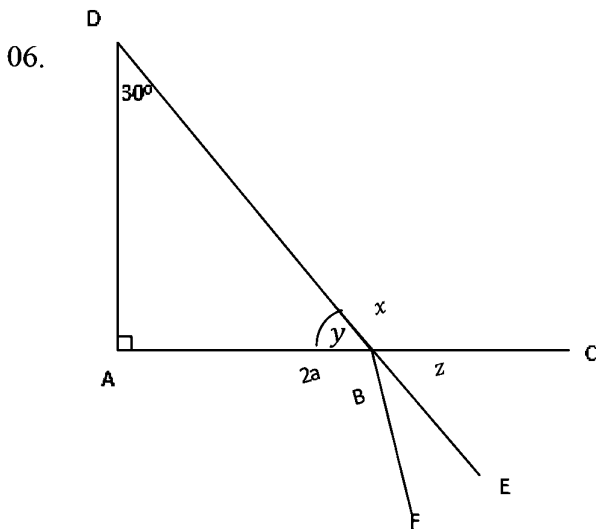
05.(a) Ajith gives two mangoes he had, to Nirmala. Now the number of mangoes Sunil has is three times of the remaining number of mangoes Ajith has.

I. If Ajith has x mangoes, write an expression to represent the number of mangoes Sunil has. (2 marks)

II. Sunil has 12 mangoes. Find the number of mangoes Ajith has. (3 marks)

(b) I. Find Highest common factor of 12, 20, 32. (3 marks)

II. Rewrite the expression $8xy - 12x + 4xz$ separating into factors. (3 marks)



AD , AC and DE are straight lines. AC and DE intersect at B.

I. Find the value of y (2 marks)

II. Name an angle equal to y , giving reasons. (3 mark)

III. (a) Write complement of y - (2 marks)

(b) Write supplement of y - (2 marks)

(c) Find the value of a - (2 marks)