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8

2nd Term Test - 2018
Mathematics

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Time : 2 Hrs

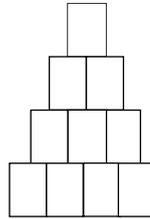
Part I

- Answer all questions in the paper itself.

01. Fill in the blanks.

$$\boxed{+7} - \boxed{} = \boxed{-2}$$

02. Saman tins were arranged in a certain shop in the following manner.



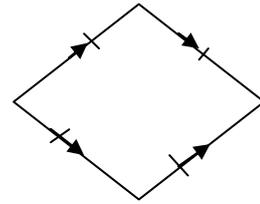
Such that, there are six rows.

- How many Saman tins were in the 6th row.
- Find the total number of Saman tins in the shop at this time.

03. Express $144a^2$ as a power of a product.

04. Simplify, $\frac{3}{10} - \frac{1}{5}$

05. Write down the order of rotational symmetry of the following figure.



06. Simplify, $573 \div 1000$

07. Express 2.05t in kilogrammes.

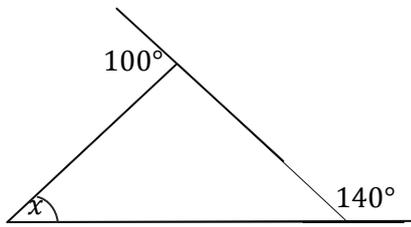
08. Evaluate $(-1)^{11}$

09. Express 35% as a ratio in the simplest form.

10. When 'y' is divided by three and then 5 is subtracted from it, The answer is 2. Build up a simple equation for it.

11. Nimal who is Manila in philippines, recieved a telephone call suddenly when the time in Sri Lanka is 11. 30 p.m on 2018.05.12. Find the time and the day in Manila in philippines at this time. (Philippines is situated in the (+8) time zone and Sri Lanka is situated in $(5\frac{1}{2})$ time zone.

12. Find the value of x

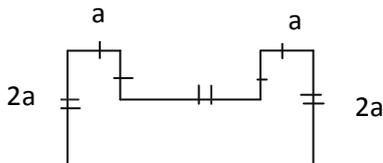


13. There are 4 ripe mangoes in a bucket which has 5 mangoes. What is the percentage of number of ripe mangoes from the total number of mangoes in the bucket.

14. Find the value of $\sqrt{196}$ using prime factors.

15. The ratio between the weight of parcels A and B is 2:7. If the weight of parcel and B is 35kg, Find the weight of parcel A.

16. If the perimeter of the given figure is 'p', build up an expression for 'p' in terms of 'a'

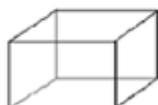


17. Find the number which gives the remainder as 1, after dividing it by 2, 4 and 8.

18. From the following select the solid and write down the corresponding letter.



a



b



c



d

.19. If the mass of 4t 53kg of stock of flour is loaded in to 7 tractors equally, find the mass of the flour which was loaded into the one tractor.

20. List out all the element in the following set within the curly brackets.

$P = \{ \text{the letters of the word SHERLOCK HOMES} \}$

Part II

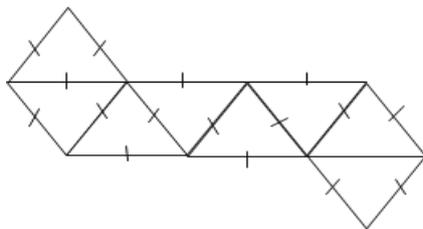
- Answer 5 questions including the **first** question.

01. Mr. Dasanayaka invested Rs. 500 000 on the 1st of January 2017 and started the business. After four months Mr. Silva joined the business by investing Rs. 600 000. The table below shows the investments done to start the business.

Name	Money invested	period of investment in months for an year.	Money invested x period of investment
Mr. Dasanayaka	500 000	12X.....
Mr. Silva	600 000Y.....Z.....

- a)i. According to the above given information write down the value of x , y and z (3 marks)
- ii. Find the ratio in which the profit should be shared among the Mr. Dasanayaka and Mr. Silva in the simplest form. (2 marks)
- iii. If the profit of this business at the end of the year is Rs. 90 000, Find the profit gained by Mr. Silva. (3 marks)
- iv. Mr. Silva said that "If Mr. Dasanayaka invested less amount to the business, he gained the profit more than the 50% ". Is this statement true? Explain the answer by giving reasons. (3 marks)

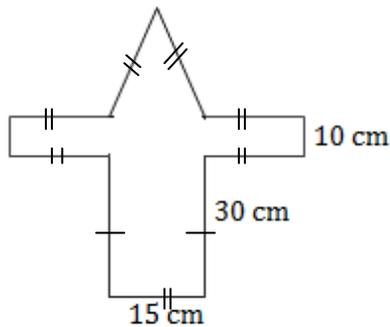
b)



- i. Write down the name of the solid which we can make by using the above net. (1 mark)
- ii. Write down the shape of a face of it. (1 mark)
- iii. Write down the number of faces, vertices and edges of this solid and show that the above values satisfy Euler's relationship (4 marks)

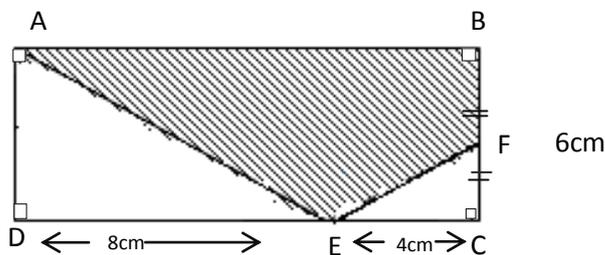
02. i. List out all the elements in the following set within the curly brackets. (3 marks)
 $A = \{\text{square numbers between 5 and 50}\}$
- ii. Fill in the blank using the suitable symbol from the brackets. (2 marks)
 $7 \dots\dots\dots A (\in, \notin)$
- iii. Find the value of $n(A)$ (2 marks)
- iv. The set "Multiples of 100 between 5 and 50" is a null set. Give reasons. (2 marks)
- v. Write a set B in which $n(B) = 3$ (There must be clearly identified feature of the elements) (2 marks)

03.a)



- i. Find the perimeter of the above figure. (3 marks)
- ii. Express the answer of part (i) in meters. (1 marks)

b)

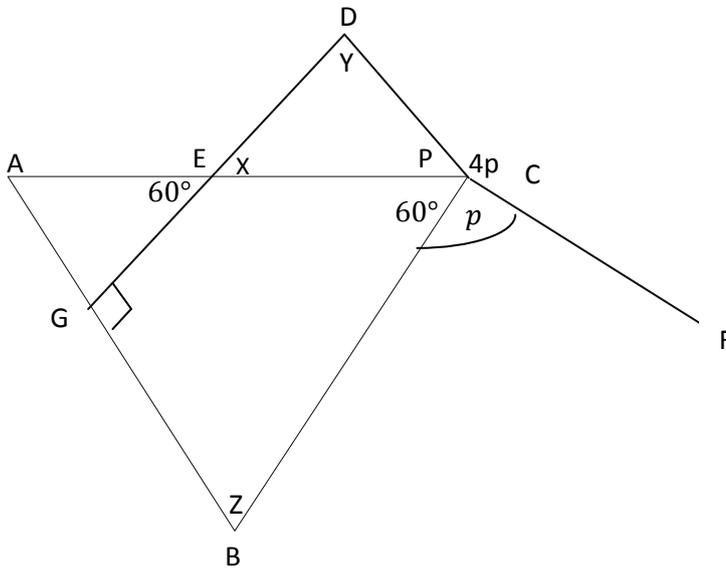


- i. Find the area of the rectangle ABCD in the above plane figure. (2 marks)
- ii.. Find the area of the triangle ADE (2 marks)
- iii. Find the area of the shaded part. (3 marks)

04. i. Simplify, $3(4a + 5) + 2(2b - 1)$ (2 marks)
- ii. If $a = 1$ and $b = -2$, find the value of $12a + 4b + 13$ (3 marks)
- iii. By getting the H.C.F of $4b + 12ab - 20$ as one factor, write down $4b + 12ab - 20$ as a product of two factors. (3 marks)
- iv. Solve, $2(3x - 2) + 3 = 11$ (3 marks)

05. Ramani brought a piece of clothes of length $5\frac{1}{4}$ m and breadth $\frac{2}{3}$ m for sewing a dress.
- i. Write down the length $5\frac{1}{4}$ m as a decimal number. (2 marks)
- ii. Find the area of the piece of clothes in square meters (m^2) (2 marks)
- iii. Seven infant dresses are needed to sew by using this piece of clothes. For that it was cut into seven equal parts in length wise. Find the length and breadth of one part cut from it. (2 marks)
- iv. A ribbon strip of length 1.25m is needed to decorate a infant dress. Which is needed for 7 infant dresses in meters. (1 mark)
- v. Rs. 450.00 is spent to sew a infant dress and it is sold for Rs 475.00. Find the profit gained by selling such 50 dresses. (3 marks)

06.



- i. Find the value of "x" by giving reasons. (2 marks)
- ii. Find the value of "p" by giving reasons. (3 marks)
- iii. Find the value of "y" (3 marks)
- iv. Find the value of "z" (3 marks)