



Grade

9

THIRD TERM TEST - 2019

Mathematics I, II

School : .....

Name of the Student/ Index No : .....

Time : 2 hrs.

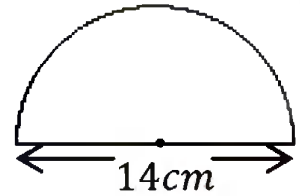
Part – I

- Answer all questions paper it self.

01. Yasiru bought a bag for Rs. 1500.00. He sold it at Rs. 1650.00 find the profit percentage.

02. Simplify  $(x^2)^3 \times x^2$

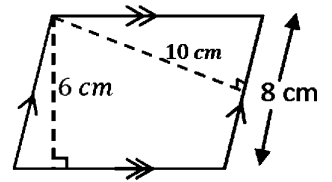
03. The diameter of a given semicircle is 14cm find the arc length



04. If  $x = 5, y = 2$  find the value of  $2x + y$

05. Simplify  $\frac{5}{b} + \frac{7}{b}$

06. Find the area of given parallelogram.

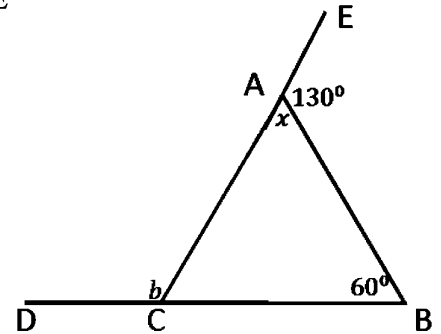


07. The perimeter of a equilateral triangular flower bed drawn to the scale of 1 : 20 is 15cm find the actual length of a side.

08. In a triangle ABC, BC side is produce to D and AC side is produce to E

i. Find the value of  $x$

ii. Find the value of  $b$



09. Find the range of 8,15,20,10,33,30,35

10. A- {Prime numbers between 0 and 10}

i. Write all elements of set A

ii. Find  $n(A)$

11. If  $PQ = RS$  in the figure given below. write the straight line segment equal to PR



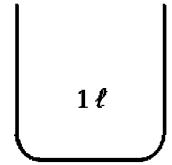
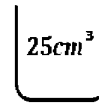
12. Solve an inequality  $x - 1 < 3$ , Write the largest integer satisfies  $x$

13. The magnitude of an exterior angle of a regular polygon is  $45^\circ$

i. Find the number of sides of a polygon

ii. What is the name of this regular polygon

14. The capacity of a container is  $1\text{ l}$ . It is required to completely fill using another container whose volume is  $25\text{ cm}^3$ . How many times need to put water?

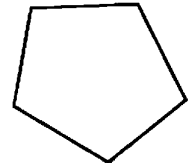


15. The number of coconuts plucked from coconut trees one by one given below. 10,15,18,20,30,31,38,40 Find the median of them.

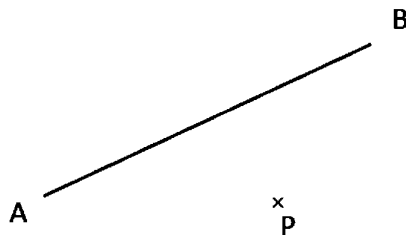
16. Mass of Sadeepa is  $45.54\text{ kg}$  Round of nearest whole number of his mass.

17. Make  $S$  the subject of the  $V^2 = U^2 + 2as$

18. Find the sum of interior angles of given figure.



19. Construct a perpendicular line from the point  $P$  to the line  $AB$



20. In the vessel  $A$  has 2 blue beads, 3 red beads and vessel  $B$  has 2 red beads, 3 blue beads which are identical in all other aspects. The red bead is put in to the vessel  $B$  from vessel  $A$ . Then take out a bead from vessel  $B$  randomly. Find the probability of taking a blue bead.

## Part II

- Answer 05 questions including 1<sup>st</sup> question.

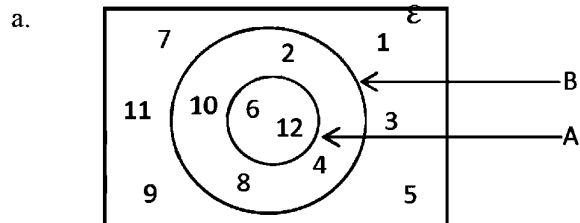
01.

- i. Construct a line segment  $AB = 7\text{cm}$  (01)
- ii. Construct a perpendicular bisector of  $AB$  (02)
- iii. Name the point of intersection of the lines  $AB$  and perpendicular bisector as  $O$  (01)
- iv. Construct a semicircle with the center  $O$  and diameter  $AB$  (02)
- v. Name the point of intersection of semicircle and perpendicular bisector as  $C$  (01)
- vi. Join  $AC$  and  $BC$  to complete the triangle  $ABC$ . (01)
- vii. Find the area of  $ABC$  triangle. (01)
- viii. Find the area of semi-circle (02)
- ix. You are assigned to create a beautiful flower bed in front of the principal's office as the sketch that you have created above.
  - a. Write 3 things need to construct this flower bed expand the construction in the compound. (01)
  - b. Write 3 steps to construct the above perpendicular bisector using things in part (a) (03)

02.

- a. There is an information of a certain work finished during 3 days. 10 people finished  $\frac{1}{4}$  of a work in a first day.  $\frac{1}{2}$  of a work in a second day and remains in a third day.
  - i. What is the fraction of the work done by first and second days of the whole work. (02)
  - ii. What is the remaining fraction of the work to do third day of the whole work. (02)
  - iii. If the salary of a day for a person is Rs. 1200.00 Sandeepa said total cost for a work is Rs. 35 000.00. Is it true or false. Give reasons. (03)
- b. Solve following algebraic fractions.
  - i.  $\frac{x}{3} + \frac{2x-1}{2}$  (02)
  - ii.  $\frac{4}{(x+2)} + \frac{3}{(x+2)} - \frac{2}{(x+2)}$  (02)

03.



Answer the following questions based on the information in the venn diagram.

- i. Write the elements of  $A'$  (01)
  - ii. Write the elements of  $B$  (01)
  - iii. Write the elements of  $B'$  (02)
  - iv. Write the relationship between  $A$  and  $B$  using suitable symbol. (02)
  - v. Copy the given venn diagram on your answer sheet and shade  $A \cap B$  (02)
- b. According to the venn diagram.
- i.  $n(s)$  (01)
  - ii.  $P(A)$  (02)

04.

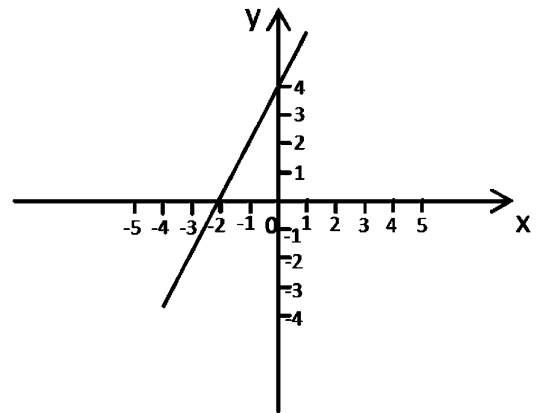
a. Given graph represent  $y = mx + c$  form line.

i. Find the intercept (01)

ii. Find the gradient (03)

iii. Write the equation of the line passes through the vertex point and parallel to the given line. (02)

iv.



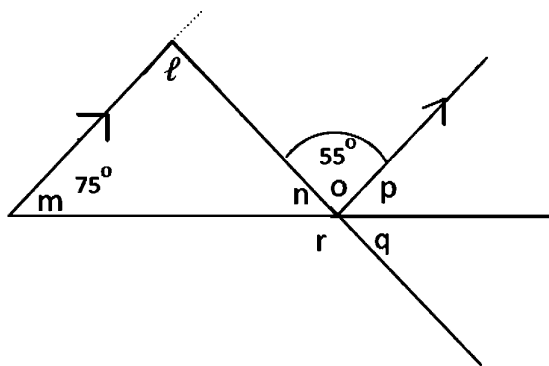
b. The price of an orange and an apple is Rs. 115.00 price of two oranges and an apple is Rs. 170.00

i. Taking the price of an orange as Rs.  $x$  and the price of an apple as Rs.  $y$  construct a pair of simultaneous equations. (02)

ii. By solving the pair of simultaneous equations find the price of an orange and an apple. (02)

05.

a.



In a given figure According  $m = 75^\circ$ ,  $o = 55^\circ$  according to given data find the values of following angles with reasons.

$\hat{p} = \dots\dots\dots$

$\hat{q} = \dots\dots\dots$

$\hat{r} = \dots\dots\dots$

b. A ladder is fitted to the top of a wall with the height of 3m and other end of the ladder 4m away and is situated from the bottom of the wall on the same ground level.

i. Draw a sketch due to the above data .

ii. Find the height of the ladder.

06.

a. A and B are two places which are on straight road on along . West and East direction and the distance between them are 20m. The place B is on East of the place A. A tree is on the place P and the bearing of  $030^\circ$  from the place A.

i. The distance between A and P is 24m . Draw a scale diagram using the scale of 1cm representing 4cm. (03)

ii. Find the bearing of P from B (02)

b. Information on the no of kilograms of sugar sold by a certain shop at 20 days given in the following ungrouped frequency distribution.

i. Fill in the blanks (01)

ii. Find mode (01)

iii. Find the mean of the sugar sold by a day to the nearest whole number. (04)

Kilograms of sugar	No of days
8	3
10	4
12	.....
14	4
16	2
18	1