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Department of Education, Southern Province
Department of Education, Southern Province

අවසාන වාර පරීක්ෂණය 2019
Year End Term Test 2019

9 ශ්‍රේණිය
Grade 9

MATHEMATICS - I

පැය 2½ ටි.
2½ hours

• Answer all the questions. (Each question carries 02 marks)

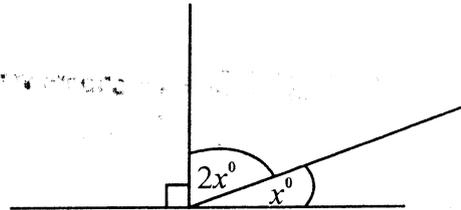
01. Write down 3420 in scientific notation.

02. Simplify, $\left(1 \frac{2}{5} - \frac{1}{5}\right)$ of $\frac{5}{6}$

03. Suraj bought a watch. The buying price is Rs. 5000 and the selling price is Rs. 5300. Find the profit percentage he gain.

04. Write down the answer in the blank $9 : 4 = 45 : \square$

05. Using the information in the figure find the value of $2x$.

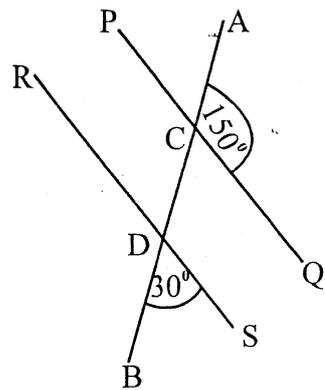


06. If $x = \frac{1}{3}$ find the value of $6 - 6x$.

07. Round off 75.8 to the nearest whole number.

08. General term of a number pattern is $15 - 2n$. Find its 7th term.

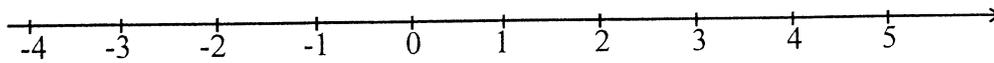
09. According to the data given in the figure are the lines PQ and RS parallel to each other? Give reasons.



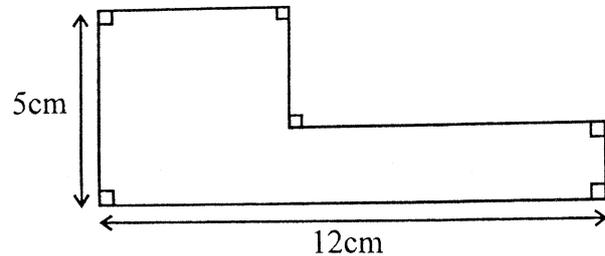
10. Make 'm' the subject of $y = mx + c$

11. Simplify, $\frac{2x}{3} - \frac{x}{4}$

12. Solve the inequality $x - 1 \geq 1$ and represent the solutions on the number line.

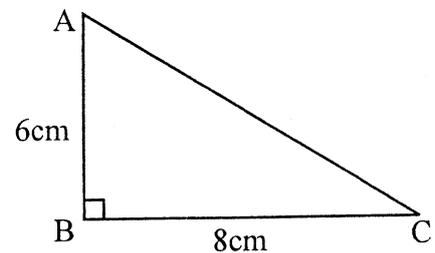


13. Find the perimeter of this figure.



14. Using the knowledge of factors find the value of, $(111)^2 - (11)^2$

15. Using the given data in the figure find length of the side AC.



16. Length, breadth and height of cuboid shaped water tank is 3m, 2m and 1.5m respectively. Find its capacity in litres.

17. 6, 7, x, 4, x, 5 mean of this data set is 6.

(i) Find the value of x .

(ii) Write the mode.

18. All the exterior angles of a centrain polygon are equal in magnitude and one exterior angle is 18° . Find the number of sides of the polygon.

19. Factorize, $x^2 + 3x - 18$

20. There are identical beads, 4 are red colour, 3 are yellow colour and 5 are blue colour. A bead is taken out randomly. Find the probability of getting a,

(i) red bead.

(ii) blue bead.

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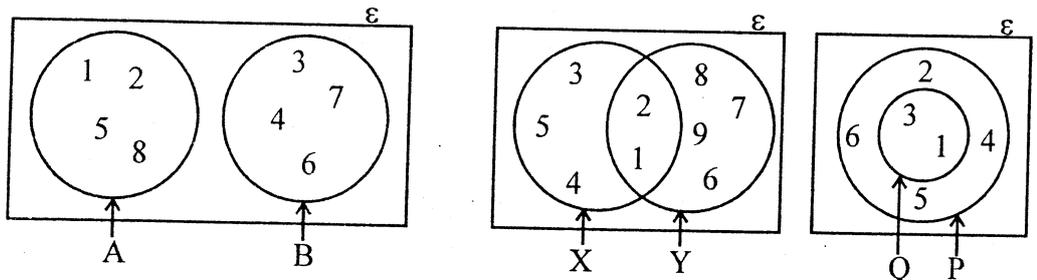
9 ශ්‍රේණිය
Grade 9

MATHEMATICS - II

පැය තුනයි
Three hours

Write down the answers for the first question and 04 other questions.
 First question carries 16 marks and each other question carries 11 marks.

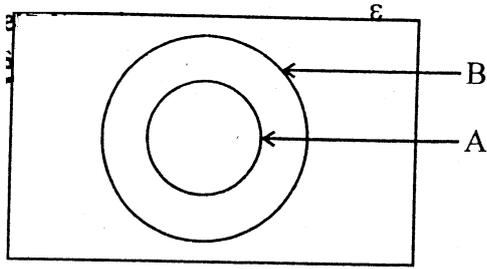
- (01) (a) $A = \{\text{multiples of 3 between 0 and 20}\}$
 $B = \{\text{multiples of 5}\}$
- (i) Write down the elements of A and B sets separately as a list. (02m.)
 (ii) Select and write down finite set and infinite set from the above 2 sets. (02m.)
 (iii) Define finite sets and infinite sets. (02m.)
- (b) Observe the below venn diagrams and write down the answers for the following questions.



- (i) Name the two disjoint sets. (02m.)
 (ii) Write down the element of the sets $X \cap Y$ and $P \cap Q$. (02m.)
 (iii) Write down the element of the sets $P \cup Q$ and $A \cup B$. (02m.)
 (iv) Select and write down the correct set notation. (02m.)

$$A \subset B, X \subset Y, P \subset Q, Q \subset P$$

- (c) Copy the venn diagram and shade the region A' . (02m.)



(02) Do the following constructions using the ruler and the pair of compasses.

- (i) Draw the straight line segment $AB = 8\text{cm}$. (02m.)
- (ii) Construct a 60° angle at A such the AB is an arm. (02m.)
- (iii) Construct a 30° angle at B such that BA is an arm. (02m.)
- (iv) From that complete the ABC triangle. (01m.)
- (v) Mark the mid point of AB as D. Construct the circle by taking D as the centre and AD or BD as the radius. (02m.)
- (vi) Measure and write down the magnitude of \hat{ACB} angle. (02m.)

(03) An incomplete table which is use to draw the graph of the function $y = 3x - 1$ is given below.

x	-3	-2	-1	0	1	2	3
y	-10	-7	2	5	8

- (i) Fill in the blanks of the table. (03m.)
- (ii) Draw the graph of $y = 3x - 1$ on a suitable cartesina plane (02m.)
- (iii) Using the graph find the, (02m.)
- (a) Gradient (02m.)
- (b) Intercept (02m.)
- (iv) Write down the equation of the straight line which is passess through (0, 0) point and parallel to the straight line in part (ii). (02m.)

(04) (a) Solve, $x + 3y = 9$
 $x - 2y = 4$ (04m.)

(b) Solve, $\frac{2(a+1)}{4} - 3 = \frac{3a-1}{4}$ (04m.)

(c) Solve, $5x + 2 [3(x - 2) + 2(x - 1)] = -1$ (03m.)

(05) (a) A shop which sells electric goods bought radios at Rs. 9000 each. They marked the price of a radio by keeping 20% as the profit percentage. When selling it outright purchase they decided to give a 10% discount for a radio.

(i) Find the profit they hope to gain by selling a radio. (02m.)

(ii) Find the marked price of a radio. (01m.)

(iii) If saman bought a radio at outright purchase, find the discount he received. (02m.)

(iv) Find the amount he paid to buy the radio. (01m.)

(v) Find the profit percentage the shop keeper gain by selling a radio in the outright purchase. (02m.)

(b) A brocker charges 5% as the commission from the owner when selling a house. If the commission he charged from the owner is Rs 75000 find the selling price of the house. (03m.)

(06) (a) ABC is a equilateral triangle. A is located due North of B.

(i) Represent this data on a sketch. (02m.)

(ii) Using it find the below bearings. (04m.)

(1) Bearing of A from B

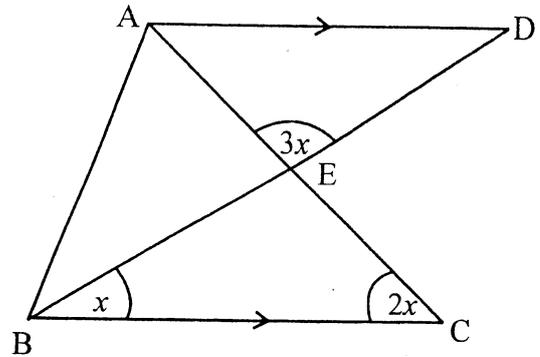
(2) Bearing of C from B

(b) Using the information in the figure,

(i) Name 2 pairs of alternate angles. (02m.)

(ii) Find the value of x . (02m.)

(iii) If $\hat{ABD} = \hat{DBC}$, find the value of \hat{BAD} (01m.)



(07) There was a children's fair in the primary section of Siri Parakum Vidyalaya. There were veralu bags which contain 100g of veralu. The below data represent the number of veralu in each bag.

10	12	11	10	9	10	9	11	12	13
12	11	10	9	10	11	12	8	9	11
11	10	9	8	13	10	11	9	10	13

(i) Find the range of the data (01m.)

(ii) Using this data make a ungrouped frequency distribution. (05m.)

(iii) Write down the mode of the data set. (01m.)

(iv) Find the meadian. (02m.)

(v) Find the mean number of veralu in a bag to the nearest whole number. (02m.)