



Minuwangoda Education Zone

Second Term Evaluation - 2025

Grade - 11

Mathematics I

Name:

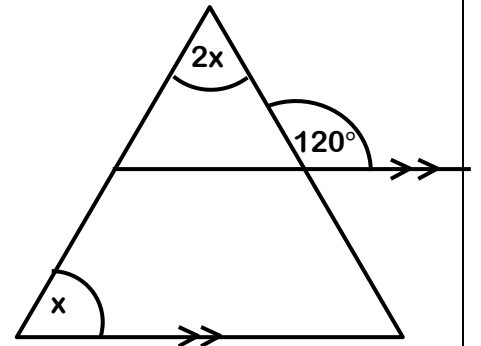
Time: 2 hours

Part A

Answer all the questions.

01) Annual assessed value of a business premises is Rs.24 000 and Rs.720 rates is charged from it per quarter. Calculate the rates percentage charged by the urban council annually.

02) Find the value of x .

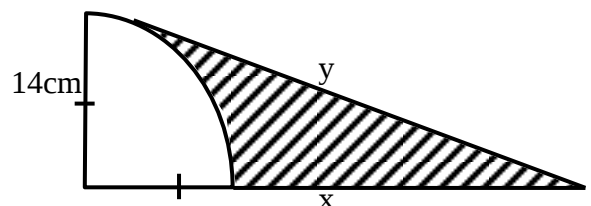


03) Find the LCM of $6ab, 8a^2b$.

04) Solve. $\frac{1}{x} + \frac{2}{5x} = \frac{1}{5}$

05) Circumference of a circular face of a cylinder is 88cm and it's height is 12cm. Find the area of the curved surface.

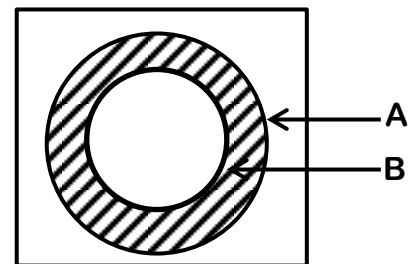
06) Write an algebraic expression for the perimeter of the shaded part.



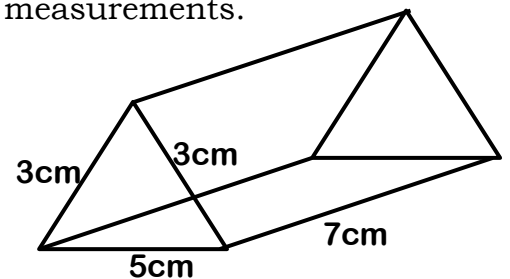
07) Solve. $(2x - 1)(x + 3) = 0$

08) Write $\lg 2 = 0.3010$ in index form.

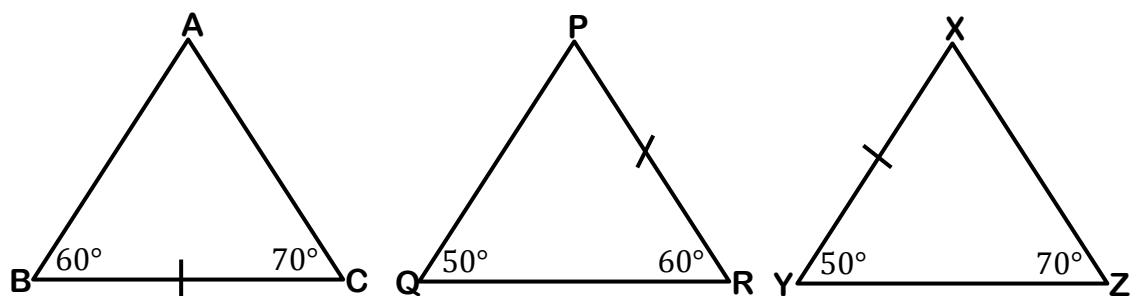
09) Write the shaded part in set notation.



10) Draw sketches of 2 faces except triangular face with measurements.

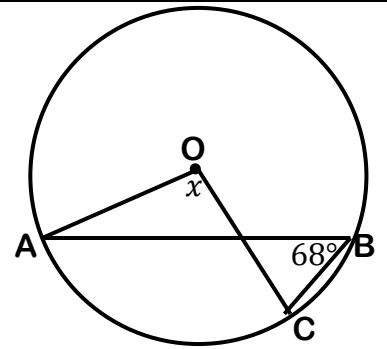


11) Select a pair of congruent triangles from following 3 triangles and write the case of congruence.



12) A fair coin is tossed twice and write the probability of getting head in both terms.

13) Find the value of x .



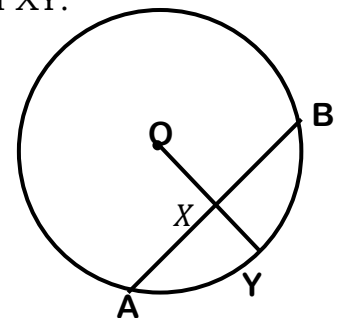
14)

- i. Write the size of a class
- ii. Write the upper limit of the class interval 11 - 15.

Class interval	Frequency
11 - 15	5
16 - 20	7

15) Write the equation of the straight line that passes through (0, 2) and (2, 6).

16) $AB = 12\text{cm}$ and radius of the circle is 10cm. Find the length of XY.

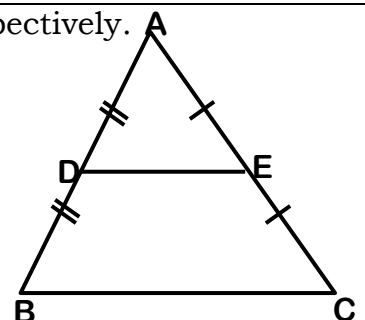


17) Write 2 requirements that should be satisfied by a quadrilateral to be a parallelogram.

18) 15 men take 12 days to complete a certain task. Find how many days will be taken to complete exactly half of the above task by 10 men.

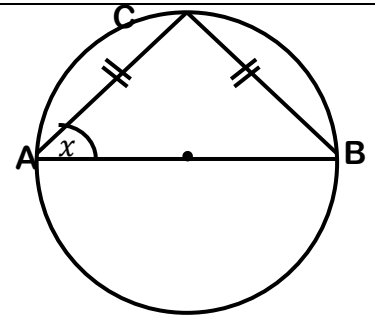
19) In ABC triangle D and E are mid points of sides AB and AC respectively.

$DE = \frac{1}{2}BC$	
$DE \nparallel BC$	
$\hat{A}BC = \hat{A}CB$	



20) Find the common ratio of the geometric progression $x, 2x, 4x, 8x, \dots$

21) If AB is a diameter, find the magnitude of x .

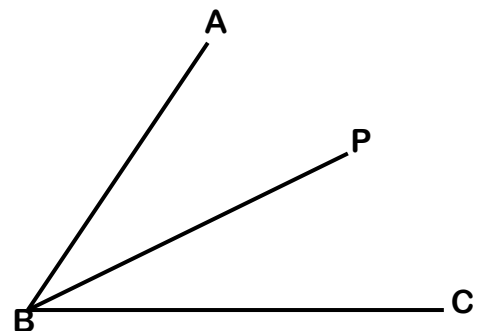


22) $(x^{-2})^3$ Write with positive indices.

23) Factorize $2x^2 - 5x + 3(2x - 5)$

24) Simplify $1 + \frac{5}{x+3}$

25) Find the locus of point which is equidistant to AB and BC and 4cm away from BC and is on BP and name it as X.

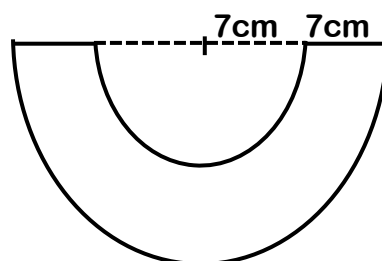


Part B

01) From a stock of tiles purchased for a new house $\frac{4}{7}$ was used for living room and $\frac{2}{3}$ of remaining was used for a room. Remaining 60 tiles was adequate for the bathroom.

- i. Find the fraction of tiles remaining after using to the living room.
- ii. Find the fraction of tile used for the room.
- iii. Find the fraction of tile remaining after using for living room and room.
- iv. If the cost of whole stock of tiles is Rs.504 000, then find the price of a tile

02) Following sketch illustrates the collar of a baby frock. It has been prepared by removing semi - circular part with radius 7cm from semi - circular part with radius 14cm.



- i. Find the area of the minimum piece of cloth (rectangular shape) required to cut above collar. Draw a sketch of it by attaching to the above figure. .
- ii. Find the minimum length of the thread that is required to attach around the collar.
- iii. Find the area of the collar.

03) Saman invested Rs.80 000 to purchase shares from a company by paying Rs.20 per share and company pays Rs.4 per share as dividend.

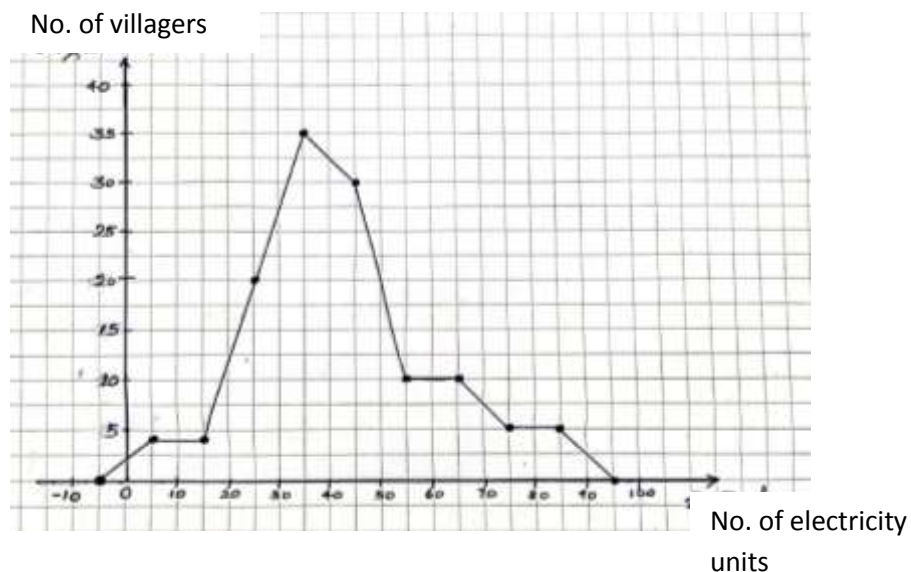
- i. Find the number of shares purchased
- ii. Find the dividend income received after 1 year.
- iii. After 1 years he sold all his shares for Rs.25 per share. Find his capital gain.

He deposited total income received by selling all the shares and dividend income in a financial institution which pays 20% annual compound interest.

- iv. Find the total income he received after 2 years.

04) Following incomplete table illustrates information about number of electricity units used by certain group of villagers.

No. of electricity units	Number of villagers	Cumulative frequency
0 - 20	8	8
20 - 30	20	28
30 - 40	35	
40 - 50		
50 - 70	20	
70 - 90		

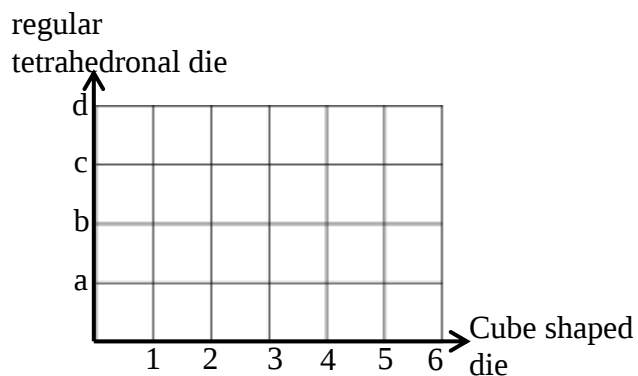


- i. According to the frequency polygon, Fill in the blanks of the “Number of villagers” column in above table.
- ii. Draw histogram on the above frequency polygon according to given data.
- iii. Complete cumulative frequency column.
- iv. Find the probability of randomly selected villager being a consumer who is used 50 units or more.

05) Cube shaped fair die which is marked 1, 2, 3, 4, 5, 6, on its faces and regular tetrahedronal fair die which is marked a, b, c, d on its face are rolled once and recorded the numbers and letters marked on side which touches the table.

a)

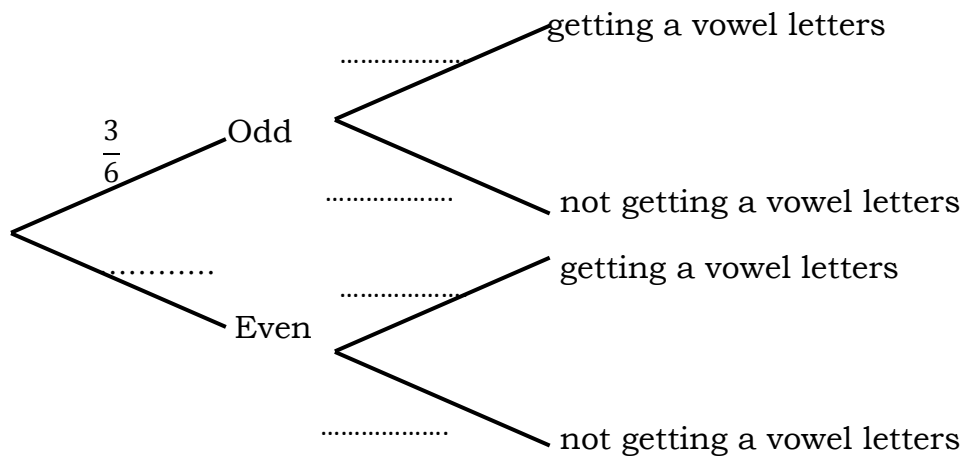
- (i) Draw all the possible outcomes on the following grid.



- (ii) Find the probability of getting a vowel from tetrahedron die with an even number from cubed shape die

b)

(i)



(ii) Show that answer of a (ii) is true by calculating probability.