



Provincial Department of Education Northern Province



Monthly Examination Time :- 1 hour 15 Minutes

Grade - 11

Maths

July 2022

Part A

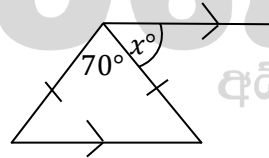
Answer all questions on this question paper itself.

1) If a vendor earns a profit of Rs.1000 by selling a watch for Rs.6000. Calculate the profit percentage?

2) Solve. $\frac{4a-3}{5} = 1$

3) It has been estimated that 6 men will take 12 days to complete a certain task. How many days required to complete the half of the above task for 4 men?

4) Find the value of x according to the information given in the figure.

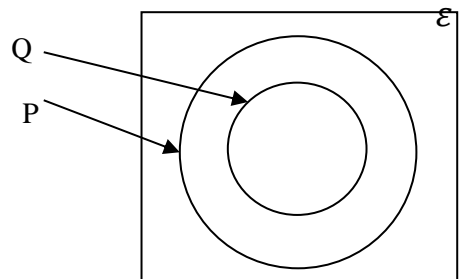


5) Find the value of $\log_x x^3$

6) Find the least common multiple of the following expressions.

$$3x^2y, 6xy, 2y^3$$

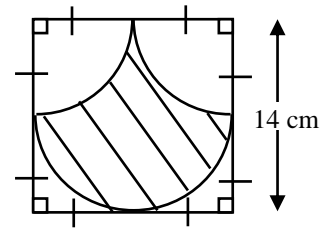
7) Shade the region that represents $Q \cup P'$ in the given Venn diagram



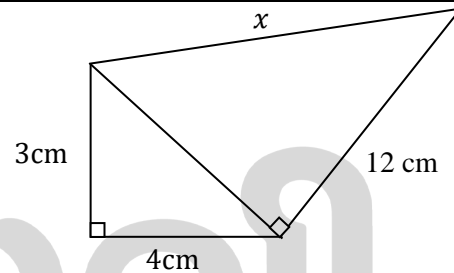
8) Simplify. $\frac{9y^3}{2x^2} \times \frac{6x}{y^2}$

9) If the gradient of the straight line which passes through the points $(5, a)$ and $(7, 10)$ is 3, find the value of a .

10) Find the perimeter of the shaded part in the figure.



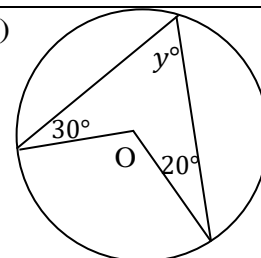
11) Find the value of x in the figure.



12) If the mean of the data 5, 8, x , 9, 10 is 7, Find the value of x .

13) Factorize. $5x^2 - x - 4$

14) Find the value of y in the figure. (O is the centre of the circle)

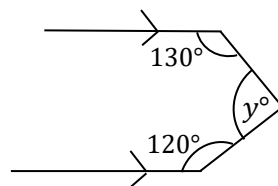


15) Solve. $5x^2 - 45 = 0$

16) First term and Seventh term of an arithmetic progression are 4 and 46 respectively. Find the common difference.

17) A box contains identical balls. There are 4 white and 8 red balls. A ball is taken randomly from the bag. Find the probability of the ball being red.

18) Find the value of y in the given figure?



19) If the total surface area of a cube is 2400cm^2 , find the length of an edge?

20) If $7.64 = 10^{0.8831}$, find the value of $\lg 0.764$?

(20 × 3 = 60 Marks)

Part B

Answer all questions on this question paper itself.

01. $\frac{1}{4}$ of fuel in a filling station reserved for health officers and $\frac{1}{5}$ for educational officers.

i. What fraction of the total fuel in the filling station is reserved for health and educational officers?

ii. If $\frac{2}{11}$ of the remaining amount of fuel, reserved for other essential needs. What fraction of the total fuel in the filling station is reserved for other essential needs?

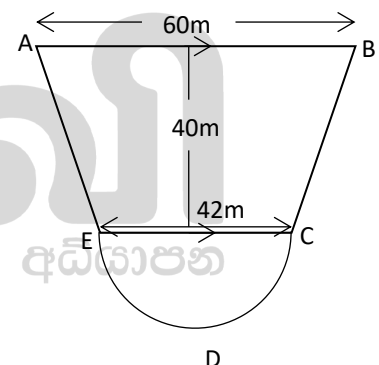
ii. Half of the remaining amount of fuel distributed to the public. If the amount of fuel distributed to the public was 4500L. What is the total amount of fuel in the filling station initially?

iii. 6 days were taken to distribute the fuel as above. What is the total amount of fuel can be distributed in such 20 filling stations within 3 days?

2. ABCE is a trapezium shaped auditorium. CDE is a semi circular stage with diameter CE.

i. Find the radius of the stage?

ii. Find the length of arc CDE ?



iii. Find the area of auditorium with stage?

iv. It is required to add a rectangular part with stage that is of area equal to the area of stage, with CE as a side, inside the auditorium. Draw a sketch of this rectangle with its measurements, in the above figure.

(2 × 20 = 40 Marks)