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மாகாணக் கல்வித் திணைக்களம் - வட மத்திய மாகாணம்
DEPARTMENT OF EDUCATION – NORTH CENTRAL PROVINCE



Grade

08

Third Term Test -2019

Mathematics - I, II

School :

Name of the Student Index No:

Time: 02 hrs.

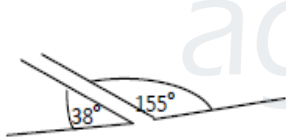
Part I

- Answer all the questions.

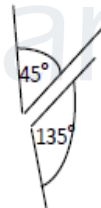
01. Write the special name of shaded part.

02. Find the value of $(-3) - (-4)$ 

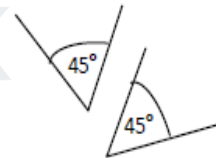
03. Underline the pairs of complementary angles from followings.



A



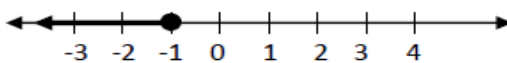
B



C

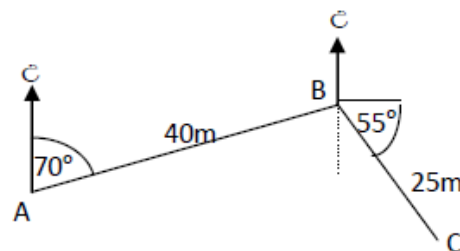
04. What is the 9th term of the triangular number pattern starting from 1 and written in ascending order.

05. Write the inequality represented on the number line in algebraic form.

06. Simplify, $3\frac{1}{2} \times \frac{3}{7} \div \frac{3}{4}$

07. Find the probability of getting a prime number when rolling an unbiased die with its faces marked from 1 to 6.

08. Describe the location of B from A.



09. Express $169x^2$ as a power of a product.

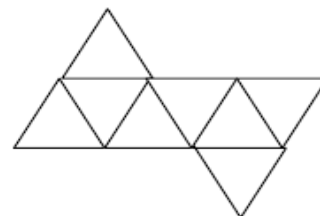
10. Name the plane figure which has no symmetrical axis and 2 Order of rotational symmetry.

11. $\sqrt{2^4 \times 3^2 \times 5^2}$ Find the value.

12. $16 - 4n + 24n^2$

Write the above expression as a product of two factors.

13. Write the number of vertices of the solid which can be made by following net figure.



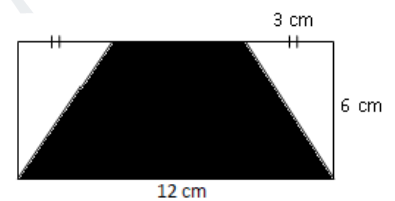
14. The mass of cement loaded in a lorry is 5t. Find the mass of remaining part, after removing 2t 750kg from it.

15. Solve the equation $\frac{y}{4} - 1 = 5$

16. Find the median of following numbers 15 , 10 ,12 , 8 , 20 , 3 , 7 , 19 , 16

17. Find the time and date in Osaka, Japan when time in Sri Lanka is 22:00 on 2019.09.25.
(Sri Lanka is located on the $+5\frac{1}{2}$ time zone and Osaka is located on +9 time zones)

18. Find the area of shaded part.



19. Express 5% as a ratio in simplest form.

20. To make an alloy, copper and iron are mixed in the ratio 1:3 and iron and aluminum are mixed in the ratio 2:5. Find the ratio of copper to iron to aluminium.

Part II

- Answer the first question and four other questions
- Answer five questions in all.

01.

a) The number of units of electricity consumed by 30 families during one month is given below.

76 , 59 , 43 , 30 , 41 , 51 , 61 , 75 , 80 , 35 ,

82 , 32 , 44 , 45 , 56 , 61 , 77 , 85 , 37 , 46 ,

53 , 64 , 71 , 58 , 65 , 74 , 68 , 69 , 72 , 61 ,

- Represent this data in a stem and leaf diagram (04)
- What is the minimum number of units that consumed? (01)
- What is the maximum number of units that consumed? (01)
- Find the range of this data. (01)
- Write the number of houses which has consumed less than 50 units as a fraction from the total number of houses. (02)
- An extra payment should be given by houses which consumed greater than 50 units. Show that there are 70% of houses should pay an extra payment. (02)

b) $A = \{\text{multiples of 3 less than 20}\}$

$B = \{\text{the even numbers of 3579}\}$

- Write the sets A and B with their elements. (02)
- 10 _____ A, put a suitable symbol in the blank. (01)
- Write $n(A)$ and $n(B)$. (02)

02.

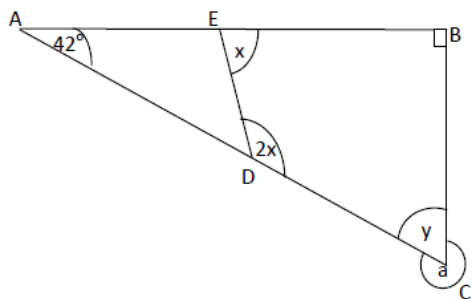
- Draw a Cartesian plane where x- axis and the y- axis are marked from +6 to -6. (02)
- Mark the points with following coordinates and join all the points in the given order.
(-2,4) , (6,4) , (4,0) , (6,-4) , (-2,-4) , (0,0) (04)
- Draw the axes of symmetry on the figure and write their equations. (03)
- Write the coordinates of the point which the axes of symmetry are intersected each other. (02)

03.

- Construct the ABC triangle , with side lengths $AB = 6\text{cm}$, $BC = 8\text{cm}$ and $AC = 10\text{cm}$ (03)
- Write the magnitude of \hat{ABC} (01)
- Write the name of the triangle due to the angle \hat{ABC} (01)
- Mark the midpoint of AC as O (01)
- Draw a circle by taking OA as the radius. (02)
- Write the special name of AC according to the circle. (01)
- Colour a sector of the circle BOC on the circle that you constructed. (02)

04. The length, breadth and height of a cuboids shaped vessel are 45cm, 20cm and y cm. $\frac{1}{3}$ of vessel is filled with water and that volume is 9000cm^3 .
- When $\frac{1}{3}$ of the vessel filled with water ,write the amount water using “y” (02)
 - Find the height of the vessel in cm (03)
 - Find the maximum volume of the vessel in l (02)
 - If the vessel is completely filled with water, how many 500ml bottles can be filled from the water in the vessel. (02)
 - The production cost of a500ml water bottle is Rs.15.00 and its selling price is Rs.40.00, Find the profit gained by selling all the bottles. (02)

05.



- Find the magnitude of following angles by giving reasons according to the given information from the figure.

Y = _____ (02)

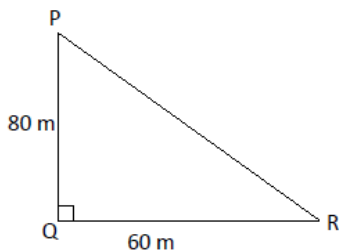
X = _____ (02)

a = _____ (01)
- Find the magnitude of \widehat{EDA} by giving resonous. (02)
- Name a pair of complementary angles from the triangle ABC (02)
- If $AB = 9\text{cm}$, $BC = 8\text{cm}$ and $AC = 12.04\text{ cm}$, Find the area of the triangle ABC (02)

06.

- a)Raheem’s mother gave Rs.450 to him and told him to spend, $\frac{1}{3}$ on food, 10% on transport and remaining amount for buying a paper set.
- Find the amount of money spent on food. (01)
 - How much he spent for travelling? (02)
 - Write the amount of money which spent to buy the paper set as a percentage form the money that mother gave in a nearest whole number. (03)

b)



Above figure shows a sketch of the locations of P , Q and R

- Draw a scale diagram of the triangle PQR representing 20m by 1 cm . (03)
- Find the actual length of PR by using the Scale diagram. (02)