

SAMAGRA SHIKSHA, KERALA
ANNUAL EVALUATION - 2019
MATHEMATICS

A

E 803

STD: VIII

Score: 40

Time: 1½ hrs

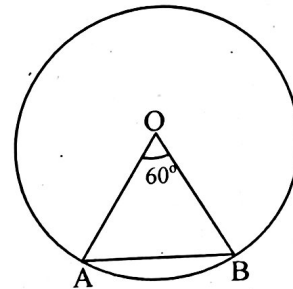
Instructions

- Read all instructions carefully before answering
- Write necessary steps along with each answer
- First 15 minutes is cool-off time

Answer any three questions from 1 to 4. Each carries two scores (3 x 2 = 6)

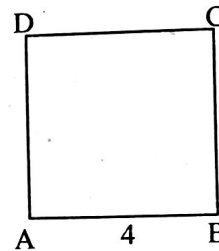
1. In the figure, $\angle AOB = 60^\circ$, $AB = 3$ cm

- (a) What is the measure of $\angle A$?
- (b) What is the radius of the circle ?



2. ABCD is a square; $AB = 4$ cm

- (a) What is the perimeter of the square ?
- (b) What is the ratio between the length of a side and the perimeter ?



3. Draw a rectangle of area 12 sq.cm

- 4. a) $x + y = 0$, if x is taken as 2, what is y ?
- b) Find $x - y$.

Answer any four questions from 5 to 10. Each carries three scores (4 x 3 = 12)

5. a) $x^2 - y^2 = (x + y)$ (-----)

b) Find $7^2 - 3^2$

c) $(100 \frac{1}{2})^2 - (99 \frac{1}{2})^2 = \dots\dots\dots$

6. The sides of a rectangle are in the ratio 2:3

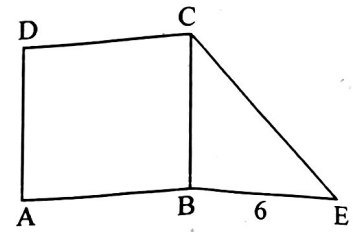
a) If the breadth is $2a$, what is the length ?

b) If the perimeter of the rectangle is 40cm, find its length and breadth.

7. (a) What is the sum of the inner and the outer angles at a vertex of a polygon ?
 b) The measure of the inner angle of a regular polygon is 135° . How many sides does it have ?

8. ABCD is a square, $BE = BC = 6$ cm.

- a) What is the length of AE ?
 c) Find the area of the trapezium AECD



9. If $x = -7$, $y = 3$, find $x+y$, xy and $x^2 + y^2 + 2xy$.

10. Shibu deposited 10000 rupees in a bank, which gives 10% interest compounded annually.

- a) After one year how much money would he have in his account ?
 b) After one more year he withdrew 10000 rupees. What is the balance amount in his account ?

Answer any four questions from 11 to 16. Each question carries 4 scores.

(4x4=16)

11. The table below shows the employees of a factory sorted according to their daily wages. Draw a histogram.

Daily Wages	No. of Employees
500-600	6
600-700	8
700-800	10
800-900	6
900-1000	4

12. In triangle ABC, $AB : BC = 3 : 4$, $BC : AC = 5 : 4$

- a) If $AB = 30$ cm, what is the length of BC ?
 b) If $BC = 20$ cm, what is the lengths of AB and AC ?
 c) What is $AB : BC : AC$?

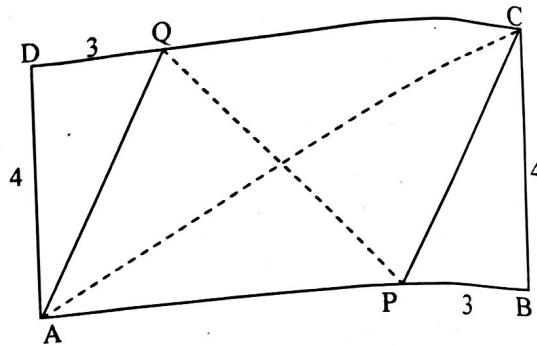
13. a) $x = -3$, which among the following is x^2 ?

(-9, 9, -6, 6)

b) If $x = 3$ and $y = -4$, find $x^2 + y^2$ and $x^2 - y^2$.

c) Write one more pair of numbers satisfying the equation $x^2 + y^2 = 5^2$.

14. In the figure, ABCD is a rectangle
 $AB=8$ cm, $AD=4$ cm, $PB=QD=3$ cm



- What is the length of AP ?
 - What is the length of AQ ?
 - What is the area of APCQ ?
 - What is $AC \times PQ$?
15. a) If $AB = 5$ cm; $\angle A = 60^\circ$, then draw the rhombus ABCD.
 b) What is the length BD ?

16. Prepare a frequency table of the following scores obtained by 30 students in a test.
- 42, 21, 37, 45, 37, 38, 23, 17, 11, 43
 7, 35, 14, 27, 31, 23, 26, 27, 5, 35
 48, 6, 19, 28, 36, 24, 29, 10, 15, 29

Read the given mathematical idea carefully and answer the following questions.

(6 × 1 = 6)

17. What is the square root of 25 ? $5 \times 5 = 25$. Therefore square root of 25 is 5.
 -5×-5 is also equal to 25. Therefore -5 is also the square root of 25. That is, every perfect square other than zero has two square roots, one is a positive number and the other is the negative of this number. Using the symbol $\sqrt{\quad}$ we represent the positive square root. For example $\sqrt{25} = 5$ and $-\sqrt{25} = -5$

- What is $\sqrt{1}$?
- What is $\sqrt{36}$?
- What is $\sqrt{36} \times \sqrt{36}$?
- What is $-\sqrt{36}$?
- Find $\sqrt{1} \times -\sqrt{1}$
- What is $-\sqrt{36} \times -\sqrt{36}$?
