



WS 2
MT 103(E)

THIRUVANANTHAPURAM EDUCATIONAL DISTRICT

MATHEMATICS WORKSHEET 2021-22 STANDARD X

MATHEMATICS OF CHANCE AND SECOND DEGREE EQUATIONS

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1) A box contains 10 black and 5 white balls. If a ball is taken from it

- a) What is the probability of it being black?
- b) What is the probability of it being white?

2) If 1 is added to the product of two consecutive multiple of 2 is 121. Find the numbers?

3) When each side of a square was reduced by 3 metres the area became 100 sq.m

- (a) What was the length of a side of the original square?
- (b) Find the perimeter of the original square?

4) There are 25 boys and 15 girls in class 10A and 15 boys and 20 girls in class 10B. If we select a student from each class for the Maths club.

- a) What is the probability of both students being boys?

- b) What is the probability of both students being girls?

c) What is the probability of atleast one girl?

5) The length of a rectangle is 6cm longer than its breadth and its area is 40 sq.cm. By taking the breadth as 'x'

a) Write the second-degree equation based on the given data.

b) Find the length and breadth

6) One is asked to say a two-digit number.

a) How many numbers were there?

b) Find the number of perfect square numbers

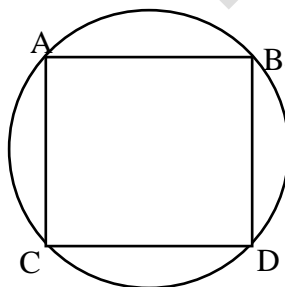
c) What is the chance of getting the number not a perfect square?

7) The algebraic expression of the sum of n terms of an arithmetic sequence is $n^2 + 8n$. The sum of continuous terms starting from the first of this sequence is found to be 240.

a) Write a second degree equation based on this statement.

b) How many terms of this arithmetic sequence must be added to get 240?

8)



a) If length of side of square is "x" unit. What is area of square

b) Find the area of circle

c) In the figure, what is the probability of a dot we put without looking to be within the square?





9) In the arithmetic sequence 5,7,9.....

a) Find the common difference

b) Find the n^{th} term

c) How many consecutive terms of the arithmetic sequence 5, 7, 9 ... must be added to get 140?

10) The product of a positive number and the number 8 more than it is 105

a) What is the least number to be added to make the product a perfect square?

b) What are the numbers?
