DEPARTMENT OF GENERAL EDUCATION
DIET ERNAKULAM
VAIBHAVAM 2021
SSLC – ACADEMIC SUPPORT

MATHEMATICS

T 29

Time : 45 Mt
Score : 20

Instructions

- Give explanations where ever necessary

1. Measurement of perpendicular side of an Isosceles triangle is 5 cm . Find the other perpendicular side (1)

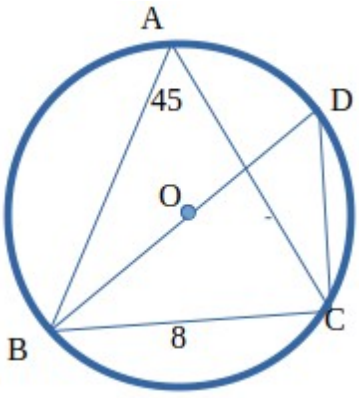
2. $p(x) = 3x^2 – 4x + 2$, Find P(1)? (1)

3. One side of a rhombus is 12 cm and one of its angles measures 50^0 . Find the distance between the parallel sides ? (2)

   [sin 50 = 0.77, cos 50 = 0.64]

4. $p(x) = x^2 – 6x + 11$ (2)
   a) Is (x-2) a factor of p(x) ?
   b) Is not, which number subtracted from p(x) to get the polynomial with (x-2) is a factor (3)

5. In ΔABC < A= 45^0 , BC = 8 cm .O is the centre of the circle

   1, Find < BDC ?

   2, Find < BCD ?

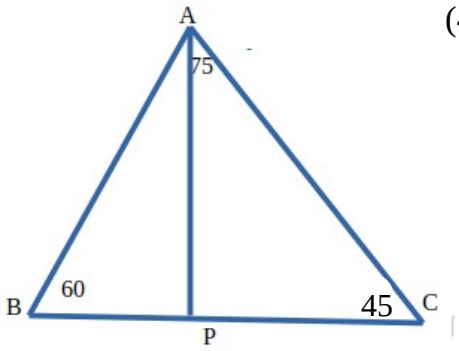
   3, What is the length of BD ? (3)

6. A rectangle of width4 cm is cut off from a square. The area of the remaining part is 21 sq,cm

a) Let one side of the square is taken as x , what is the breadth of the remaining part
b) Write the area of the remaining part as a second degree equation
c)Find one side of the square

(4)

7. In ΔABC $< A = 75^0$ $< B = 60^0$ $< C = 45^0$
The perpendicular from $< A$ to BC Meet at P



a) Find $< BAP$?
b) If BP = 3 cm Find AP ?
c) What is the length of BC ?
d) Find the area of ΔABC ?

8. An iron rod 28 cm long is to be bent to make a rectangle.
The area of that rectangle should be 45 sq.cm .

(4)

a) What is the sum of its length and breadth ?
b) Write the area of the rectangle in the algebraic form
by taking the breadth as x
c) Find the length and breadth of the rectangle?

(5)

9. $p(x) = x^2-7x+13$

a) Find p(3) ?
b) Find p(x)- P(3)
c) Write p(x)- p(3) as the product of two first degree polynomial
d) Write the solutions of the equation p(x)- p(3) = 0

(5)

10. From the top of the building a boy with height 1.5 m, sees the top of a tower at an angle of elevation 60^0 and the base of the tower with an angle of depression 30^0. Height of the building is 8.5 m .

a) Draw a rough figure and mark the measurement
b) Find the distance between building and tower ?
c) Find the height of the tower?