

1/10/2020  
THURSDAY

# MATHEMATICS

STD - 8  
class - 38

## Assignment

1) Consider a circle exactly fitting inside the square, if we put a dot without looking in this square, what is the probability of it being within the circle?

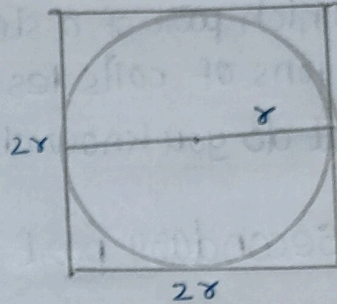
Ans) Let the radius of the circle =  $r$

$$\text{Area of the circle} = \pi r^2$$

$$\text{one side of the square} = 2r$$

$$\text{Area of the square} = 2r \times 2r$$

$$= \underline{\underline{4r^2}}$$



$$\therefore \text{Probability of the dot} = \frac{\pi r^2}{4r^2}$$

$$= \frac{\pi}{4}$$

$$= \underline{\underline{\frac{\pi}{4}}}$$

2) A regular hexagon formed by two overlapping equilateral triangles. If we put a dot without looking in this figure. What is the probability of being within the hexagon?

Ans)

see the figure,

Drawing LI, GI and HK we get  
12 small equilateral triangles.

All these are equal.

6 of them are in the green part.

$$\therefore \text{Probability of the dot} = \frac{6}{12}$$

$$= \underline{\underline{\frac{1}{2}}}$$

