

MATHEMATICS PROJECT

CLASS: 10B

PROBABILITY

TOPIC: To Find the probability of the occurrence of an event, namely getting heads and tails while tossing a coin and probability of getting a six while rolling out a dice.

OBJECTIVE: To verify that the probability of getting a head or a tail is $\frac{1}{2}$ each and the probability of getting any number ranging from 1 to 6 while rolling a dice is $\frac{1}{6}$.

PROCEDURE:

A. Tossing a coin

- In a group of 3 as mentioned herein, one has to toss the coin, one has to note the number of heads and tails, and the other is to write down the observations.
- Fill up the details as specified:

No. of times the coin is tossed	No. of times the head appears	No. of times the tail appears	$p(head)$	p(tails)
10				
50				
100				
200				

- $p(heads) = \frac{\text{no.of times the head appears}}{\text{total number of tosses made}}$
- $p(tails) = \frac{\text{no.of times the tail appears}}{\text{total number of tosses made}}$

B. Throwing a die

- In a group of 3 as mentioned herein, one has to throw the die, one has to note the number of times each of 1, 2, 3, 4, 5 and 6 which appears and the other is to write down the observations.
- Fill up the details as specified:

No. of times the die is thrown	Number of times for which 1 appears	Number of times for which 2 appears	Number of times for which 3 appears	Number of times for which 4 appears	Number of times for which 5 appears	Number of times for which 6 appears
20						
60						
120						

TOPIC: ANGLE AT THE CENTRE OF A CIRCLE IS TWICE THE ANGLE SUBTENDED ON THE REMAINING PART OF THE CIRCLE

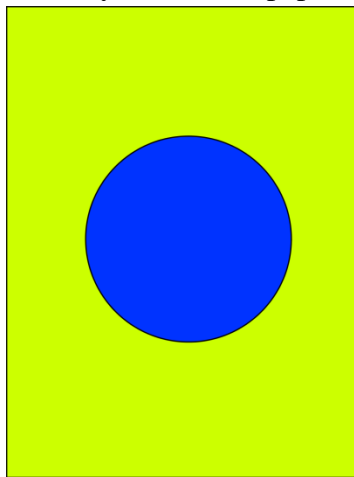
OBJECTIVE: To verify that the angle subtended by an arc at the centre of a circle is twice the angle subtended by the same arc at any other point on the remaining part of the circle, using methods of paper cutting, pasting and folding.

MATERIALS REQUIRED:

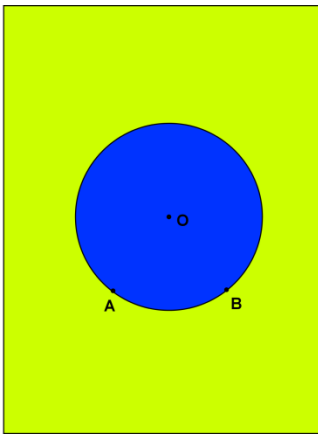
1. Geometry box
2. Practical workbook
3. Coloured chart papers – yellow, blue and red
4. Scissors
5. Scale
6. Sketch pen
7. Adhesives or glue sticks
8. Tracing papers – 2

PROCEDURE:

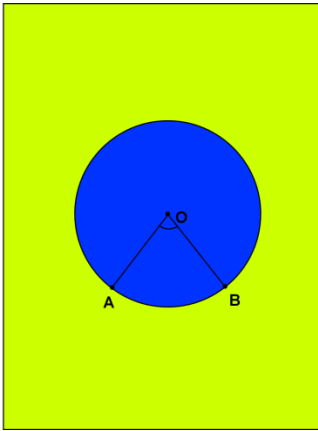
1. Draw a circle of 5 cm radius on a blue coloured chart paper. Use black sketch pen for drawing.
2. Cut out the circle.
3. Take a yellow chart paper. Cut it in the size of an A4 sheet and paste the circle on it.



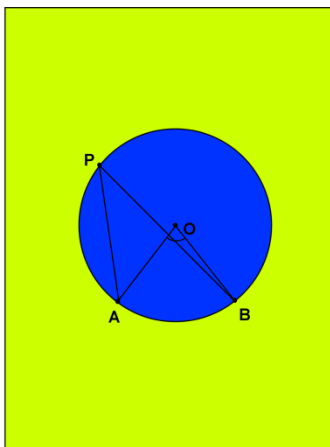
4. Take two points A and B on the circle to obtain the arc AB.



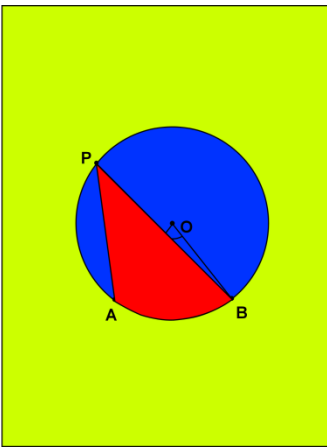
5. Form a crease joining OA (by folding) and draw OA.
6. Form a crease joining OB (by folding) and draw OB.



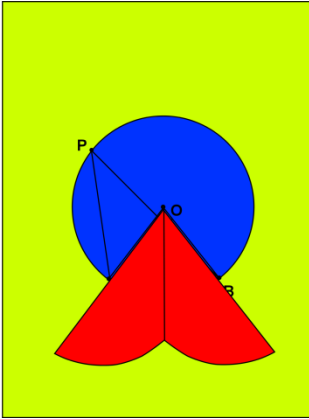
7. Arc AB subtends $\angle AOB$ at the centre O of the circle.
8. Take a point P on the remaining part of the circle
9. Form a crease joining AP (by folding) and draw AP.
10. Form a crease joining BP (by folding) and draw BP.
11. Arc AB subtends $\angle APB$ at the point P on the remaining part of the circle.



12. Place tracing paper on the circle and draw a replica of the $\angle APB$. Prepare two such replicas of $\angle APB$ with green or red chart papers.



13. Place the replicas adjacent to each other on $\angle AOB$



RESULT:

It is noted that the two replicas placed adjacently completely cover $\angle AOB$. $\therefore \angle AOB = 2\angle APB$

S. No.	Id No	Name	Sec	Group
1	1540	Ayushi Jasani	KB	Group 1
2	2457	Yash Jain	KB	
3	2163	Ankit Vora	KB	
4	2384	Vidhi Gandhi	KB	Group 2
5	1989	Jinal Kothari	KB	
6	2095	Aditya Barejia	KB	
7	2148	Jayti U Palana	KB	Group 3
8	2574	Sahib Deep Singh Parmar	KB	
9	2575	Arjun Kalawat	KB	
10	1942	Hiral Tushar Vora	KB	Group 4
11	2304	Uvesh Sajid Esani	KB	
12	2051	Minesh Jagani	KB	
13	2263	Aman Ali	KB	Group 5
14	1964	Aanshi Turakhia	KB	
15	2710	Urvashi Wadhwa	KB	
16	1934	Dheer P Asher	KB	Group 6
17	2174	Dhwani Vora	KB	
18	2619	Priyank Prakash Patalia	KB	
19	1547	Pratik Shaw	KB	Group 7
20	2712	Hera Rahman	KB	
21	2253	Aryan Kumar Rai	KB	
22	2434	Kavita Sharma	KB	Group 8
23	1383	Pallavi Patel	KB	
24	1922	Vidhi T Vyas	KB	

LAST DATE OF SUBMISSION OF PROJECT: 28th November, 2014

