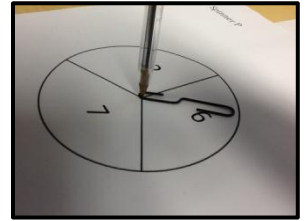


Spinner Activity



(Application of probability and discussion of transitivity property)

Teacher Directions:



- Students should pair up. Use an unfolded paper clip with a pencil and the spinners provided (Refer to photo on right). Do spins in pairs. One student uses spinner P and the other student uses spinner R. One round is 15 spins for both spinners
- After each spin, the spinner with the highest number will receive a check mark on the table provided labeled P and R. Total up the number of checkmarks for each spinner at the bottom of the table. The spinner with the most checkmarks wins!
- Record and sum the scores for all pairs. (sample: total P 90 and R 60) Find the percentage that P wins over R. Repeat for R vs. S.
- Ask students to make a prediction: Which spinner would win on P vs. S?
- Discuss transitivity.
- If P wins over R and then R wins over S, do we expect P to win over S?
- We will see that usually P does not beat S.
- Fill in the squares for which spinner wins on each outcome. (P wins with probability $5/9$ over R)
- Tell the students that the letters P, R, and S came from the paper, rock, and scissors game.

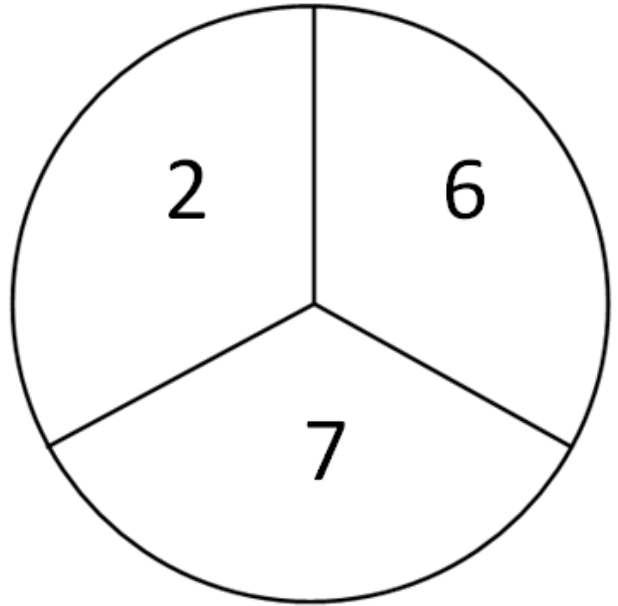
Reference: Bernadette Mullins and David Pollack, Probability experiments for student investigation, Association for Women in Mathematics Newsletter, 32 (2002), no. 1, 11-13.

For more information:

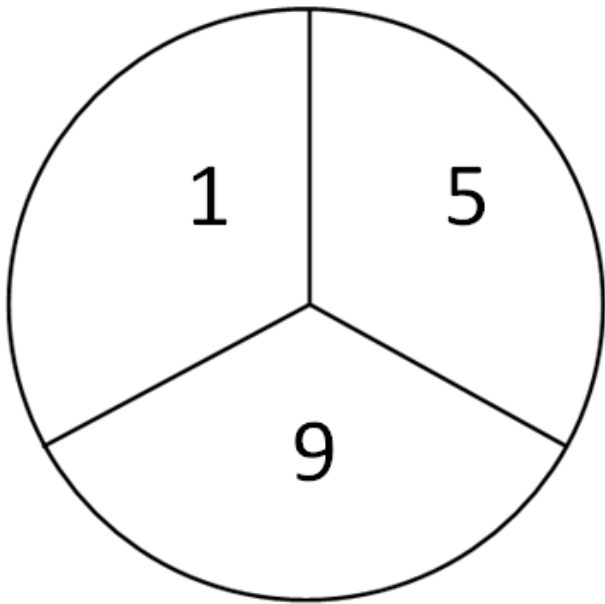
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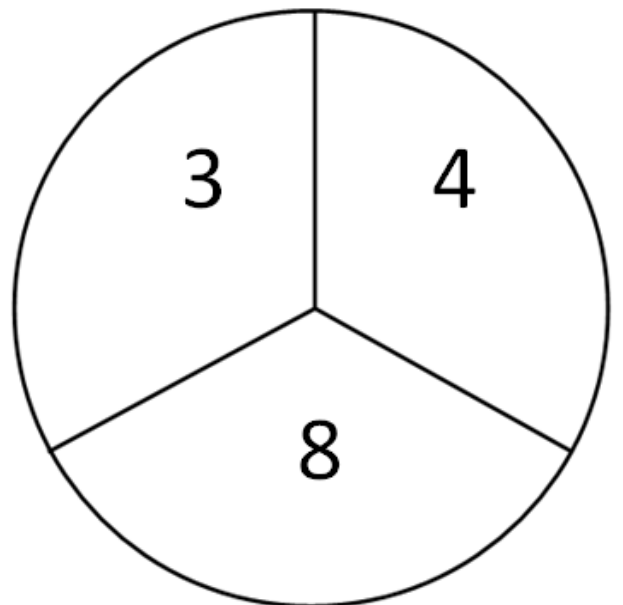
Spinner P



Spinner R



Spinner S



	P	R
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Total		

	R	S
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Total		

	P	S
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Total		

	P	2	6	7
R				
1				
5				
9				

	S	3	4	8
R				
1				
5				
9				

	S	3	4	8
P				
2				
6				
7				

Answers

R \ P	2	6	7
1	P	P	P
5	R	P	P
9	R	R	R

R \ S	3	4	8
1	S	S	S
5	R	R	S
9	R	R	R

P \ S	3	4	8
2	S	S	S
6	P	P	S
7	P	P	S