1) A probability experiment is conducted. Which of these cannot be considered a probability outcome? 1) A

A) 1.58 B) $\frac{2}{5}$ C) 91% D) 0.53

Probabilities values are greater or equal to zero and less or equal to one.

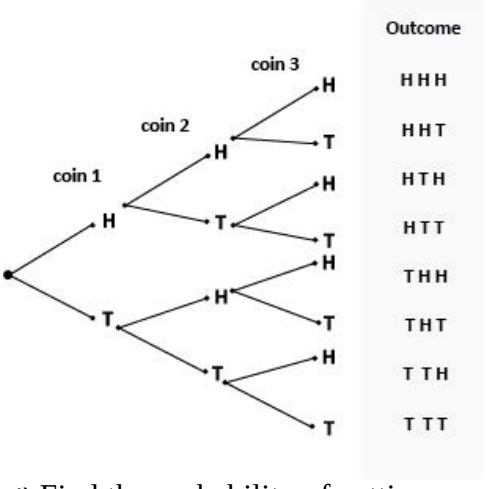
2) If an event cannot happen, what value is assigned to its probability? 2) D

A) -1 B) 1 C) 100% D) 0

The probability of an impossible event is zero. This is because an impossible event cannot occur, so the number of ways it can occur is zero.

3) How many possible outcomes would there be if three coins were tossed once? 3) C

A) 2 B) 6 C) 8 D) 4



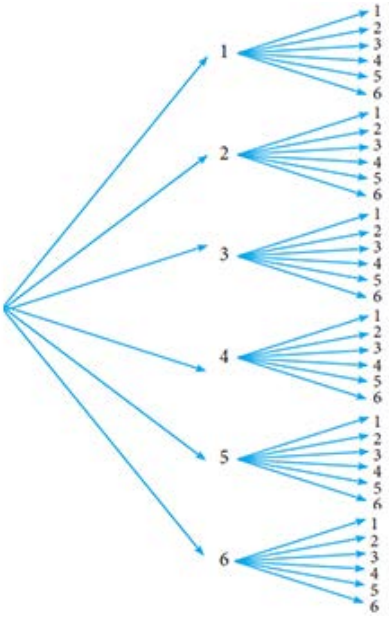
4) Find the probability of getting a number greater than 3 when a die is rolled one time. 4) C

A) $\frac{1}{6}$ B) $\frac{1}{3}$ C) $\frac{1}{2}$ D) $\frac{2}{3}$

A die has 6 faces: 1, 2, 3, 4, 5, & 6. Three of the outcomes are greater than 3, namely: 4, 5 and 6. So, the prob = 3/6 = 1/2

5) If two dice are rolled one time, find the probability of getting a sum of 6. 5) A

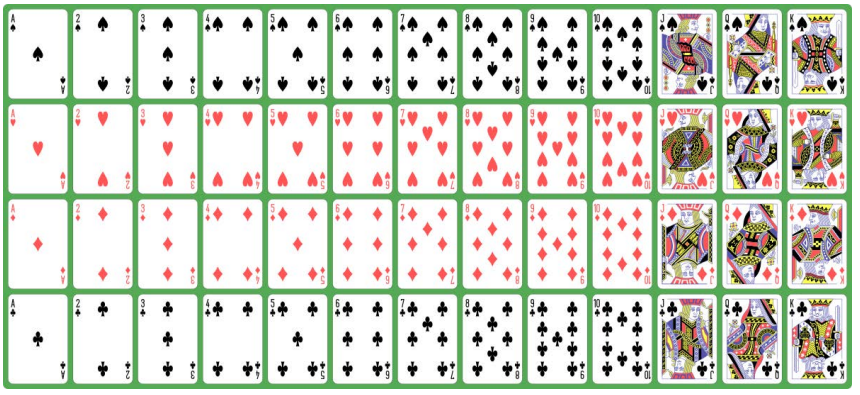
A) $\frac{5}{36}$ B) $\frac{1}{6}$ C) $\frac{7}{36}$ D) $\frac{1}{12}$



A sum of 6 occurs five times: (1,5); (5,1); (2,4); (4,2) & (3,3) out of 36 outcomes in total: 5/36

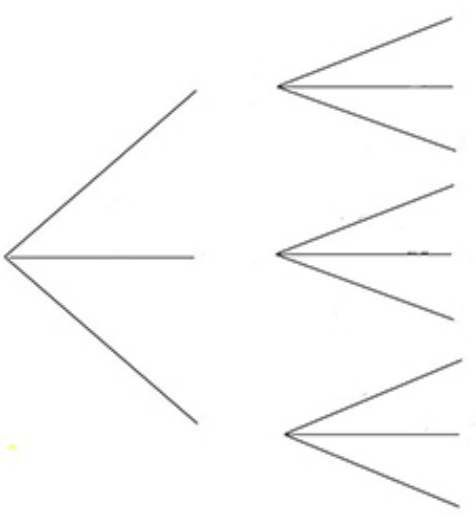
6) If a red suit is drawn from an ordinary deck of cards, what is the probability that the card is a diamond? 6) C

A) $\frac{1}{5}$ B) $\frac{1}{3}$ C) $\frac{1}{2}$ D) $\frac{1}{4}$



7) A section of an exam contains two multiple-choice questions, each with three answer choices (listed "A", "B", and "C"). Assuming the outcomes to be equally likely, find the probability (as a reduced fraction) that both answers are "C". [Hint: List all the outcomes of the sample space first.] 7) B

A) 1/27 B) 1/9 C) 1/3 D) 1/6



8) A coin is tossed 433 times and comes up heads 212 times. Use the Empirical Method to approximate the probability that the coin comes up heads. 8) A

A) 0.49 B) 0.51 C) 0.5 D) 0.329

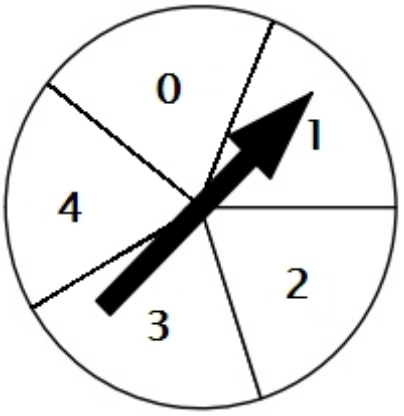
P = 212/433 = 0.4896... = 0.49

9) A couple has four children. Find the probability that all of them are girls. 9) B

A) $\frac{1}{4}$ B) $\frac{1}{16}$ C) $\frac{1}{8}$ D) $\frac{1}{2}$

There are 2 x 2 x 2 x 2 = 16 possible outcomes; only one of the outcomes consists of four girls

10) A wheel spinner with five equally-sized spaces numbered 0 to 4 is spun twice. Find the sample space, and determine the probability of an odd number on the first spin and an even number on the second spin (*Note:* 0 is considered even.) 10) A



	0	1	2	3	4
0					
1	(1,0)		(1,2)		(1,4)
2					
3	(3,0)		(3,2)		(3,4)
4					

A) $\frac{6}{25}$ B) $\frac{19}{25}$ C) $\frac{9}{25}$ D) $\frac{4}{25}$

11) If the probability that it will rain tomorrow is 0.39, what is the probability that it will not rain tomorrow? 11) A

A) 0.61 B) -0.39 C) 0.39 D) 1.39

if P(A) denotes the probability of event A to occur; and P(noA) the probability of event A not to occur, then P(A) + P(noA) = 1. Therefore, P(noA) = 1 - P(A)
In this question:
P(noRain) = 1 - P(Rain) = 1 - 0.39 = 0.61