

**Basic Probability Overview including Relative Frequency, Expected Outcomes etc – www.m4ths.com**

- (1) The probability of it raining is 0.3. What is the probability of it not raining?
- (2) Fred does a survey of 700 people. 290 liked fast food. What is the relative frequency of people liking fast food?
- (3) Jim plays 400 games of darts. The probability of winning a game is 0.7. How many games would you expect him to win?
- (4) There are 8 red counters, 3 green counters and 2 blue counters in a bag. James takes one at random. What is the probability of the counter being red or green?
- (5) A biased spinner has four sections.  $P(\text{red section}) = 0.2$ ,  $P(\text{blue section}) = 0.6$ ,  $P(\text{green section}) = 0.05$ . What is  $P(\text{black section})$  ?
- (6) Using the same spinner in question 5, if this spinner was spun 840 times, how many times would you expect it to land on the blue section?
- (7)  $P(\text{rainy day}) = \frac{3}{11}$ , what is the value of  $P(\text{not rainy day})$
- (8) Fred plays 942 games of darts and wins 378. What is the relative frequency of him winning?
- (9) AJ plays darts. Alejandro can win lose or draw.  $P(\text{win}) = 0.6$ . The likelihood of AJ losing or drawing is equal. Find  $P(\text{Draw})$ .
- (10) Complete the sentence "The probability of something NOT happening is one....."
- (11)  $P(A) = \frac{3}{5}$ ,  $P(B) = 0.2$  Given that C is the only other possible outcome, find  $P(C)$ .
- (12) Relative frequency of Kim winning darts is  $\frac{112}{371}$ . If he plays 90 games, how many would you expect him to win.
- (13) On a spinner each of the 6 sections are equally likely. What would the spinner be called in terms of probability?
- (14) On a probability scale, where must an 'unlikely' outcome appear?
- (15) X, Y and Z are the only outcomes of a game.  $P(X) = 0.15$ ,  $P(Y) = 0.45$ . Give that 700 games are played, find the number of times you would expect Z to be the outcome.
- (16) Jim can either win or lose at darts. Given that he loses 40 of the 160 games he plays, how many of 900 games would you expect him to win?
- (17) M, N and O are the only 3 outcomes of an event.  $P(M) = \frac{3}{8}$ ,  $P(N) = 0.65$  and  $P(O) = \frac{2}{5}$ . Is there an issue with this?