

# Probability

1 From a pack of 52 playing cards what is the probability of picking:

(i) a Jack = \_\_\_\_\_

(ii) a club = \_\_\_\_\_

(iii) a King or a Queen = \_\_\_\_\_

(iv) not a picture card = \_\_\_\_\_

2 The probability that a boy wins a competition is 0.05. What is the probability that he does not win the competition? \_\_\_\_\_

3 A child rolls a dice 240 times. How many times would you expect the child to:

(i) roll an odd number? = \_\_\_\_\_ (ii) roll a five? = \_\_\_\_\_ (iii) roll a 1 or 2 = \_\_\_\_\_

4 The table below shows the probability of a flower being a certain colour.

Colour	Red	Blue	White	Yellow	Purple
Probability	0.1	0.15	0.25	0.3	0.2

(i) Which colour is most likely to occur? \_\_\_\_\_

(ii) What is the probability of the flower being red **or** white? \_\_\_\_\_

(iii) What is the probability of the flower **not** being blue? \_\_\_\_\_

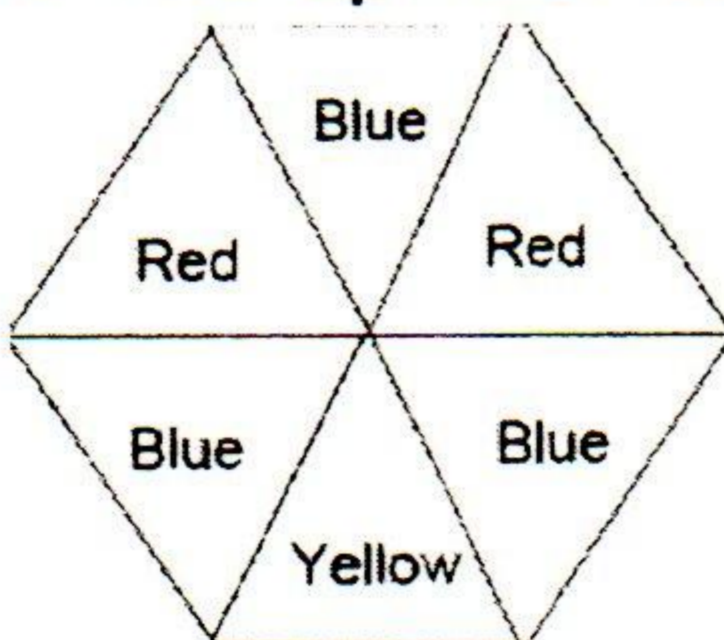
(iv) If 200 seeds are planted about how many blue flowers would you expect? \_\_\_\_\_

5 The probability of a baby being born a boy is 0.51. What is the probability that a baby will not be a boy? \_\_\_\_\_

6 The probability that Peter wins a race is  $\frac{1}{4}$ . The probability that Peter finishes second is  $\frac{10}{38}$ . Calculate the probability that Peter finishes either 1st or 2nd in the race. \_\_\_\_\_

7 The probability of a baby being born a boy is 0.51. Calculate the probability that a baby will be a girl. \_\_\_\_\_

8 The spinner below is spun 300 times.



How many times would you expect the spinner to land on:

(i) blue = \_\_\_\_\_ (ii) yellow = \_\_\_\_\_ (iii) red \_\_\_\_\_

**9** A boy takes a penalty 40 times against a goalkeeper. He scores 16 times.

(i) What is the relative frequency of him scoring a penalty? \_\_\_\_\_

(ii) If the boy took 200 penalties how many times would you expect him to score? \_\_\_\_\_

**10** A ladies' cat goes out everyday. In one month (30 days) her cat is involved in a fight with another cat on 4 occasions.

(i) What is the relative frequency of the ladies' cat getting involved in a fight? \_\_\_\_\_

(ii) How many fights is the cat likely to get involved in during a period of 3 months (90 days)? \_\_\_\_\_

**11** During a term a pupil goes to school on the bus for 75 days. The bus was late on 12 occasions.

(i) What is the relative frequency of the bus being late? \_\_\_\_\_

(ii) On how many occasions is the bus likely to be late in a whole school year (200 days)? \_\_\_\_\_

**12.** The probability of at least one person in a group of 50 having a birthday next month is [ ? ]. \_\_\_\_\_

**13.** A tetrahedral (4-sided) die is thrown. What is the probability of getting a 4? \_\_\_\_\_

**14.** A tetrahedral (4-sided) die is thrown. What is the probability of getting an even number? \_\_\_\_\_

**15.** A letter is chosen at random from the word PROBABILITY. What is the probability that it's the letter Q? \_\_\_\_\_

**16.** A letter is chosen at random from the word PROBABILITY. What is the probability that it's the letter B or I? \_\_\_\_\_

**17.** Mary tosses two coin. What is the probability of getting two heads? \_\_\_\_\_

**18.** Alice tosses a coin 100 times. How many times would you expect her to get a head? \_\_\_\_\_

**19.** Jennie is playing a dice game. The probability that Jennie wins is worked out to be  $\frac{4}{7}$ . What is the probability that Jennie does not win? \_\_\_\_\_

**20** The probability that a boy wins a competition is 0.15. What is the probability that he does not win the competition? \_\_\_\_\_

**21** A bag contains 5 green counters, 4 red counters and 3 blue counters. One counter is selected at random.

(i) What is the probability of selecting a green counter? \_\_\_\_\_

(ii) What is the probability of not selecting a blue counter? \_\_\_\_\_

(iii) What is the probability of not selecting a green or blue counter? \_\_\_\_\_