



STIRLING TUITION
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Lesson 18

Probability

Name: _____

Refer to for Explanation: Lesson 18 > Video 1 > **Calculating probability**

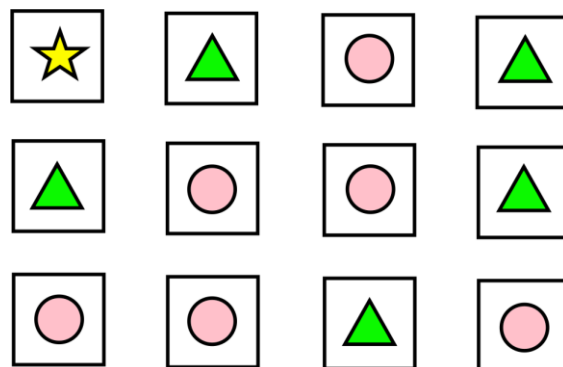
1) Theo has 3 red sweets and 2 white sweets. He picks a sweet at random.

(a) Write down the probability that Theo picks a red sweet. _____

(b) Write down the probability that Theo picks a white sweet. _____

2) Jen has 12 cards, each with a shape on it.

She takes a card at random.



(a) What is the probability that Jen takes a card with a star on it? _____

(b) What is the probability that Jen takes a card with a triangle on it? _____

(c) What is the probability that Jen takes a card with a circle on it? _____

3) Toby has 9 cards numbered 1 to 9.

He picks a card at random.

Write down the probability that the chosen card is:

(a) the number 8 _____

(b) an even number _____

(c) a number less than 7 _____

(d) a multiple of 4 _____

(e) a square number _____

(f) a prime number _____

4) There are 12 red roses, 5 yellow roses and 3 white roses in a vase.

Callum takes a rose, at random, from the vase.

(a) Write down the probability that he takes a white rose. _____

(b) Write down the probability that he takes a red or a white rose. _____

(c) Write down the probability that Callum takes a rose that is not red. _____

Refer to for Explanation: Lesson 18 > Video 2 > **Calculating missing probabilities**

1) Sean throws a biased coin.

The probability of getting tails is 45%.

Work out the probability of getting heads.

2) Tracy plants a daffodil bulb.

The probability that the bulb will grow is 0.81.

What is the probability that the bulb will not grow?

3) Manchester City play a match of football. The probability that they win the match is 0.67. The probability that they draw the match is 0.18.

Work out the probability that they lose the match.

4) There are only pink, yellow, green and blue counters in a bag.

The table shows the probability that a counter taken at random from the bag will be pink, green or blue.

Colour	Pink	Yellow	Green	Blue
Probability	$\frac{1}{5}$		$\frac{3}{10}$	$\frac{7}{20}$

Work out the probability that the counter taken is yellow.

5) Gemma has a biased spinner.

A spinner has sections labelled 1, 2, 3, 4 and 5.

The table below shows information about some of the probabilities

Number	1	2	3	4	5
Probability	0.09	x	0.19	0.34	0.27

Work out the value of x.

Refer to for Explanation: Lesson 18 > Video 3 > **Calculating values using probability**

1) There are 30 chocolates in a box.

Some of the chocolates contain nuts and the rest do not.

The probability that a chocolate containing nuts is picked at random from the box is 0.6.

How many of the chocolates in the box contain nuts?

2) A bag contains 600 coloured counters.

The counters are yellow, brown or orange.

There are 123 yellow counters in the bag.

The probability that a brown counter is chosen from the bag is $\frac{3}{10}$.

Calculate the number of orange counters in the bag.

3) There are only pink, yellow, green and blue counters in a bag.

The table shows the probability that a counter taken at random from the bag will be pink, green or blue.

Colour	Pink	Yellow	Green	Blue
Probability	0.4	0.3	0.2	0.1

There are 130 counters in the bag.

Work out the number of blue counters in the bag.

5) Mrs Mooney is organising a charity raffle.

She sells 360 tickets for £2 each.

The probability that someone wins a prize is 0.25

Each prize cost £6

The profit is donated to charity.

Work out how much money Mrs Mooney donates to charity.
