

Lesson One: Probability Introduction

Probability is part of an area of mathematics called Statistics. Probability refers to the chance that an event will happen. For example when the weather person states that there is a 30% chance of precipitation, this means that there is a 30% chance that it may rain but we don't know for sure. If a favourite sports team has an 80% chance of winning their next game, it is very likely they will win, but we don't know for sure.

0%: probability it will not happen

100%: probability it will happen

Examine the two statements below:

Statement One: The probability of rain on Monday is 20%.

Statement Two: The probability of rain on Tuesday is 90%.

→ 80% not rain

→ 10% not rain

Will it rain on Monday? Will it rain on Tuesday? Will it rain on both days? Will it rain on either day?

Not likely
20%

Very likely
90%

Not likely

Very likely

Probability is often expressed as percent but they can also be expressed as a fraction, a decimal, or in words.

Example 1

Complete the following table. The first row has been completed for you.

Fractions	Decimal	Percent	Words
$\frac{6}{10}$	0.60	60%	Six out of ten
$\frac{19}{100}$	$19 \div 100 =$ 0.19	19%	19 out of 100
$\frac{35}{50} = \frac{7}{10}$	0.70	70%	Thirty five out of fifty
$\frac{54}{100} = \frac{27}{50}$	0.54	$54 \times 100 =$ 54%	54 out of 100
$\frac{1}{8}$	$1 \div 8 =$ 0.125	$\frac{1}{8} \times 100$ 12.5%	one out of eight