

Expressing probability as fraction, decimal and percentage

WHAT THIS LESSON TEACHES

Probability is favourable outcomes over total outcomes, written as a fraction then changed to decimal and percentage.

→ A 4-colour spinner has 1 red out of 4 so probability of red is $1/4 = 0.25 = 25\%$.

→ On an 8-segment spinner with 3 prizes the chance of a prize is $3/8 = 0.375 = 37.5\%$.

MODEL THIS ON THE BOARD

WRITE THE PROBABILITY THREE WAYS

- 1 Count the favourable segments and the total segments to make the fraction.
- 2 Divide the top by the bottom to get the decimal.
- 3 Multiply the decimal by 100 to get the percentage.

ANSWER KEY

Scaffold: visual check on the page

Q1: $1/4 = 0.25 = 25\%$

Q2: $3/8 = 0.375 = 37.5\%$

Q3: $5/10 = 0.5 = 50\%$

a) Always — Every probability has these three forms.

b) Sometimes — It is less than or equal to 1 but equals 1 only if certain.

c) Never — Decimals can be any value like 0.25 or 0.375.

d) Always — They cover every possible outcome.

EXTENSION SHEET · STRETCH ANSWERS

S1: 80%

S2: 62.5%

S3: 0.75

S4: 0.5

S5: 0.4