GCSE FOUNDATION · REVISION MAT 1

Probability scale and theoretical probability

1 Write down the word that best describes the probability of each event.

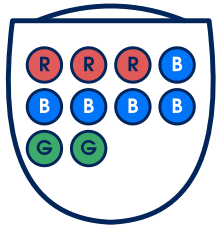
impossible · unlikely · even chance · likely · certain

(a) the sun will rise tomorrow

(b) a coin lands on heads

(c) you roll a 7 on an ordinary dice

2 A bag contains these counters.



A counter is taken at random.

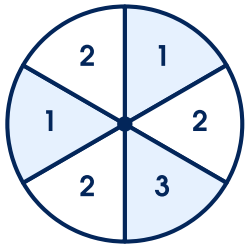
Work out the probability that it is blue.

3 Jo says,

"The probability of getting a 1 with an ordinary dice is $\frac{1}{6}$, so if I try 6 times I will get exactly one 1."

Explain why Jo is wrong.

4 Here is a fair spinner.



Show that the probability of landing on 2 is $\frac{1}{2}$.

5 A bag contains 3 red and 5 blue counters.

How many red counters must be added so that the probability of taking a red counter is $\frac{1}{2}$?

6 Cards are numbered 1 to 20. A card is taken at random.

(a) Work out P(prime number).

(b) Work out P(multiple of 3 **and** multiple of 2).

Mr&Mrs MATHS

1 (a) **certain**
(b) **even chance**
(c) **impossible**

2 5 out of 10

$\frac{1}{2}$

3 Probability tells you what is likely in the long run, not exactly what will happen.

You might get no 1s, or more than one.

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4 3 of the 6 equal sections show 2.

$\frac{3}{6} = \frac{1}{2}$ ✓

5 After adding x red: $\frac{3 + x}{8 + x} = \frac{1}{2}$

$x = 2$

Check: $\frac{5}{10} = \frac{1}{2}$ ✓

6 (a) Primes: 2, 3, 5, 7, 11, 13, 17, 19

$\frac{2}{5}$

(b) 6, 12, 18: $\frac{3}{20}$

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