GCSE FOUNDATION · REVISION MAT 2

Probability scale and theoretical probability

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

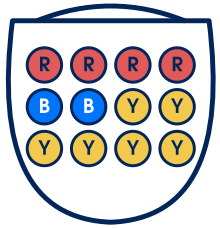
impossible · unlikely · even chance · likely · certain

(a) it will snow in London in July

(b) you roll a number less than 6 on a dice

(c) a Monday follows a Sunday

2 A bag contains these counters.



A counter is taken at random.

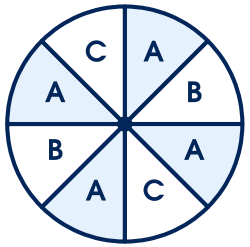
Work out the probability that it is blue.

3 Kai 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 Kai is wrong.

4 Here is a fair spinner.



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

5 A bag contains 2 red and 7 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 15. A card is taken at random.

(a) Work out P(prime number).

(b) Work out P(multiple of 4 **and** multiple of 3).

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1 (a) **unlikely**
(b) **likely**
(c) **certain**

2 2 out of 12

$\frac{1}{6}$

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 4 of the 8 equal sections show A.

$\frac{4}{8} = \frac{1}{2}$ ✓

5 After adding x red: $\frac{2+x}{9+x} = \frac{1}{2}$

$x = 5$

Check: $\frac{7}{14} = \frac{1}{2}$ ✓

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

$\frac{2}{5}$

(b) 12: $\frac{1}{15}$

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