GCSE FOUNDATION · REVISION MAT 4

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) you roll an even number on a dice

(b) it will rain somewhere in the UK this year

(c) you win a big lottery prize

2 A bag contains these counters.



A counter is taken at random.

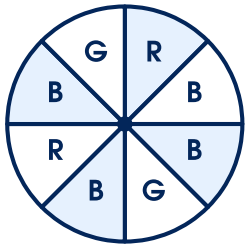
Work out the probability that it is red.

3 Max says,

"The probability of getting a 1 with a fair coin is $\frac{1}{2}$, so if I try 2 times I will get exactly one 1."

Explain why Max is wrong.

4 Here is a fair spinner.



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

5 A bag contains 1 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 18. A card is taken at random.

(a) Work out P(prime number).

(b) Work out P(multiple of 3 **and** multiple of 5).

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

2 7 out of 12

$\frac{7}{12}$

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.

ANSWERS · REVISION MAT 4

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4 4 of the 8 equal sections show B.

$\frac{4}{8} = \frac{1}{2}$ ✓

5 After adding x red: $\frac{1+x}{6+x} = \frac{1}{2}$

$x = 4$

Check: $\frac{5}{10} = \frac{1}{2}$ ✓

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

$\frac{7}{18}$

(b) 15: $\frac{1}{18}$

Mr&Mrs MATHS