GCSE HIGHER · REVISION MAT 4

Probabilities that sum to 1

1 P(snow) = 0.07.

Find P(no snow).

2 Find x.

Score	1	2	3	4	5
Probability	0.2	0.2	x	0.15	0.25

3 Explain what probabilities of 0 and 1 mean.

4 A spinner has P(A) = 0.4 and P(B) = 0.35. The only other outcome is C.

It is spun 200 times.

How many times would you expect C?

5 Show that P(not 6) on a fair dice is $\frac{5}{6}$.

6 A bag has red, white and blue beads in the ratio 2 : 3 : 5.

Find P(not blue).

7 Ben says the only two outcomes have P(A) = 0.6 and P(B) = 0.5.

Explain his mistake.

8 P(red) = x, P(blue) = x^2 and P(green) = 0.44.

These are the only outcomes.

Find x.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Probabilities that sum to 1

1 **0.93**

2 $x = 0.2$

3 **0: impossible. 1: certain.**

4 P(C) = 0.25

50 times

5 $1 - \frac{1}{6} = \frac{5}{6}$

6 $\frac{5}{10}$ are blue

0.5

7 **0.6 + 0.5 = 1.1, but the total must be 1.**

8 $x^2 + x - 0.56 = 0$

$(x + 1.4)(x - 0.4) = 0$

$x = 0.4$

Mr&Mrs MATHS