GCSE HIGHER · REVISION MAT 1

Probabilities that sum to 1

1 P(rain tomorrow) = 0.35.

Find P(no rain tomorrow).

2 A spinner is red, blue or green.

Find P(green).

Colour	Red	Blue	Green
Probability	0.2	0.35	

3 Explain why P(A) + P(not A) = 1.

4 Find P(4).

Score	1	2	3	4
Probability	0.1	0.3	x	$2x$

5 A spinner has three outcomes with probabilities 0.3, 0.45 and 0.35.

Show that these cannot be correct.

6 A bag has 30 red, blue and green counters.

P(red) = 0.4 and P(blue) = P(green).

How many green counters are there?

7 Explain why, for a fair dice, P(odd) = 1 – P(even).

8 A spinner has outcomes A, B and C.

P(A) = x^2, P(B) = x and P(C) = 0.25.

Find P(A).

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Probabilities that sum to 1

1 **0.65**

2 $1 - 0.55$

0.45

3 **Either A happens or it does not, and one of these is certain.**

4 $3x = 0.6 \Rightarrow x = 0.2$

P(4) = 0.4

5 $0.3 + 0.45 + 0.35 = 1.1$

The total must be 1.

6 P(green) = 0.3

9

7 **Every score is either odd or even, never both.**

8 $x^2 + x - 0.75 = 0$

$(x + 1.5)(x - 0.5) = 0$

x = 0.5, P(A) = 0.25