GCSE HIGHER · REVISION MAT 4

Sample spaces

1 One sock is chosen from red, blue or green, and one shoe from light or dark.

List all the outcomes.

2 Two dice are rolled.

Find P(the difference is 2).

–	1	2	3	4	5	6
1	0	1	2	3	4	5
2	1	0	1	2	3	4
3	2	1	0	1	2	3
4	3	2	1	0	1	2
5	4	3	2	1	0	1
6	5	4	3	2	1	0

3 Explain why (3, 4) and (4, 3) are different outcomes for two dice.

4 Find P(the total is 8).

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

5 Show that flipping three coins gives 8 outcomes.

6 A 6-sided and a 4-sided spinner are spun and the scores added.

Find P(total 6).

+	1	2	3	4
1	2	3	4	5
2	3	4	5	6
3	4	5	6	7
4	5	6	7	8
5	6	7	8	9
6	7	8	9	10

7 Two dice are rolled.

Show that P(both the same) = $\frac{1}{6}$.

8 Two different digits from 1, 2, 3 and 4 are used to make a two-digit number.

Find
P(the number is greater than 30).

Mr&Mrs MATHS

ANSWERS · REVISION MAT 4

Sample spaces

1 RL, RD, BL, BD, GL, GD

2 $\frac{8}{36} = \frac{2}{9}$

3 The 3 is on a different dice each time.

4 (2, 6), (3, 5), (4, 4), (5, 3), (6, 2)

$\frac{5}{36}$

5 2 × 2 × 2 = 8

6 (2, 4), (3, 3), (4, 2), (5, 1)

$\frac{4}{24} = \frac{1}{6}$

7 6 doubles out of 36

8 12 numbers; those starting with 3 or 4; 6

$\frac{1}{2}$

Mr&Mrs MATHS