GCSE FOUNDATION · REVISION MAT 5

Sample space diagrams

1 Two spinners are used and the product is recorded.

Complete the sample space diagram.

×	1	2	3	4
1	1	2	3	4
2		4	6	
3	3	6		12
4	4		12	16

2 Two spinners are used and the product is recorded.

×	1	2	3	4
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
4	4	8	12	16

Find the probability that the product is 4.

3 Two spinners are used and the product is recorded.

×	1	2	3	4
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
4	4	8	12	16

Explain why a product of 4 is more likely than a product of 1.

4 Two spinners are used and the product is recorded.

×	1	2	3	4
1	1	2	3	4
2	2	4	6	8
3	3	6	9	12
4	4	8	12	16

Show that P(product is odd) = $\frac{1}{4}$

5 Spinner A has numbers 1, 2, 4. Spinner B has numbers 1, 2, 3. Ella wins if the product is even.

Work out the probability that Ella wins.

6 A coin is flipped and a 6-sided dice is rolled.

(a) How many outcomes are there?

(b) Find P(heads and a prime number).

Mr&Mrs MATHS

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Sample space diagrams

1

×	1	2	3	4
1	1	2	3	4
2	**2**	4	6	**8**
3	3	6	**9**	12
4	4	**8**	12	16

2 3 out of 16

$\frac{3}{16}$

3 4 appears **3** times in the diagram, 1 appears only **1** time.

4 4 out of 16 outcomes

$\frac{4}{16} = \frac{1}{4}$ ✓

5

×	1	2	3
1	1	2	3
2	2	4	6
4	4	8	12

7 out of 9: $\frac{7}{9}$

6 (a) 2 × 6 = **12**

(b) 3 out of 12: $\frac{1}{4}$

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