

Theoretical and Experimental Probability Revision

(a)	(b)	(c)	(d)																									
<p>A bag contains 6 red sweets, 5 orange sweets and 3 yellow sweets. Find the probability of choosing an orange sweet at random from the bag.</p> <p style="text-align: center; color: red;">$\frac{5}{14}$</p>	<p>A fair six-sided spinner is numbered 1 to 6. The spinner is spun once. Find the probability that the spinner lands on a multiple of 3.</p> <p style="text-align: center; color: red;">$\frac{1}{3}$</p>	<p>There are 10 balls in a bag. 7 of the balls are red and the rest are yellow. When a ball is picked from the bag at random, what is the probability that it is blue?</p> <p style="text-align: center; color: red;">0</p>	<p>There are 5 white counters, 8 black counters and 7 grey counters in a bag. A counter is chosen at random. What is the probability that it is not white?</p> <p style="text-align: center; color: red;">$\frac{3}{4}$</p>																									
(e)	(f)		(g)																									
<p>A purse contains 20 coins. They are either 10p or 5p coins. The probability of choosing a 5p coin at random is 0.4. How many 10p coins are in the purse?</p> <p style="text-align: center; color: red;">12</p>	<p>Zack rolls a biased dice. The probability that it lands on each of the numbers 1 to 4 is shown in the table. The dice is twice as likely to land on a 5 as it is to land on a 6. Complete the table.</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 5px;">Number</td> <td style="padding: 5px;">1</td> <td style="padding: 5px;">2</td> <td style="padding: 5px;">3</td> <td style="padding: 5px;">4</td> <td style="padding: 5px;">5</td> <td style="padding: 5px;">6</td> </tr> <tr> <td style="padding: 5px;">Probability</td> <td style="padding: 5px;">0.2</td> <td style="padding: 5px;">0.05</td> <td style="padding: 5px;">0.1</td> <td style="padding: 5px;">0.2</td> <td style="padding: 5px; color: red;">0.3</td> <td style="padding: 5px; color: red;">0.15</td> </tr> </table>		Number	1	2	3	4	5	6	Probability	0.2	0.05	0.1	0.2	0.3	0.15	<p>The probability that a biased spinner lands on a 2 is 0.3. Jemima spins the spinner 150 times. Work out an estimate for the number of times the spinner will land on a 2.</p> <p style="text-align: center; color: red;">45</p>											
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(i)		(k)																										
<p>Leon has a fair four-sided spinner containing the numbers 1, 3, 5 and 7. He spins it twice and adds the two numbers together to get a total.</p> <p>(a) Complete the sample space.</p> <p>(b) Calculate the probability of Leon getting a total of 10 or more.</p> <p style="text-align: center; color: red;">$\frac{3}{8}$</p>		<table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td style="background-color: #d4edda;"></td> <td style="background-color: #d4edda; color: red;">1</td> <td style="background-color: #d4edda; color: red;">3</td> <td style="background-color: #d4edda; color: red;">5</td> <td style="background-color: #d4edda; color: red;">7</td> </tr> <tr> <td style="background-color: #d4edda; color: red;">1</td> <td style="color: red;">2</td> <td style="color: red;">4</td> <td style="color: red;">6</td> <td style="color: red;">8</td> </tr> <tr> <td style="background-color: #d4edda; color: red;">3</td> <td style="color: red;">4</td> <td style="color: red;">6</td> <td style="color: red;">8</td> <td style="color: red;">10</td> </tr> <tr> <td style="background-color: #d4edda; color: red;">5</td> <td style="color: red;">6</td> <td style="color: red;">8</td> <td style="color: red;">10</td> <td style="color: red;">12</td> </tr> <tr> <td style="background-color: #d4edda; color: red;">7</td> <td style="color: red;">8</td> <td style="color: red;">10</td> <td style="color: red;">12</td> <td style="color: red;">14</td> </tr> </table> <p>A bag contains 12 red counters and 6 blue counters. Some more blue counters are added to the bag, so that the probability of choosing a blue counter is now $\frac{3}{7}$. How many blue counters have been added to the bag?</p> <p style="text-align: center; color: red;">3</p>			1	3	5	7	1	2	4	6	8	3	4	6	8	10	5	6	8	10	12	7	8	10	12	14
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