**Theoretical and Experimental Probability Revision**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **(a)** | **(b)** | | **(c)** | **(d)** |
| 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. | 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. | | 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? | 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? |
| **(e)** | **(f)** | | | **(g)** |
| 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? | 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.   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Number | 1 | 2 | 3 | 4 | 5 | 6 | | Probability | 0.2 | 0.05 | 0.1 | 0.2 |  |  | | | | 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. |
| **(i)** | | | **(k)** | |
| 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.  (a) Complete the sample space.  (b) Calculate the probability of Leon getting a total of 10 or more. | | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  | **1** | **3** | **5** | **7** | | **1** |  |  |  |  | | **3** |  | 6 |  |  | | **5** |  |  |  | 12 | | **7** |  |  |  |  | | 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 . How many blue counters have been added to the bag? | |