Theoretical and Experimental Probability Revision

(a)

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.

(b)

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.

(c)

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?

(d)

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)

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?

(f)

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		

(g)

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)

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				

(k)

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?