Year 9 Probability – Developing

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Year 9 · Maths · Probability · Level 2 Developing · 10 questions

Name _____ **Date** _____

A. Use probability

1. The table shows the probabilities of the scores on a biased four-sided spinner. Find the value of x and the probability of scoring 4.

Score	1	2	3	4
Probability	0.1	3x	0.3	x

Answer _____

2. A bag holds 4 red and 6 blue counters. Two counters are taken at random, one after the other, without replacement. Find the probability that both are red. Are the two choices independent?

Answer _____

3. A jar holds 5 lemon and 3 orange sweets. Two sweets are taken at random, one after the other, without replacement. Find the probability that one is lemon and one is orange. Are the two choices independent?

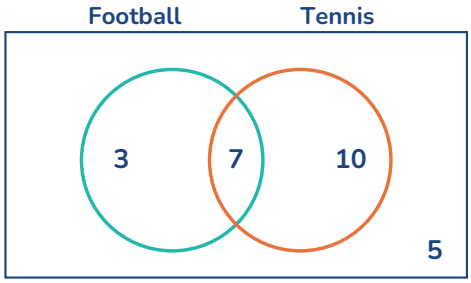
Answer _____

4. The two-way table shows the favourite sports of 82 students. One of them is chosen at random. Find the probability that the student is a girl who chose hockey.

	Football	Hockey	Tennis	Total
Boys	20	6	10	36
Girls	21	18	7	46
Total	41	24	17	82

Answer _____

5. The Venn diagram shows the students in a group who play football or tennis. A student is chosen at random. Find the probability that the student plays neither, and the probability that the student plays football or tennis (or both).



Answer _____

6. A spinner has ten equal sections and three of them are blue. It is spun 500 times and lands on blue 200 times. How many blues would you expect if the spinner is fair? What do the results suggest?

Answer _____

7. The probability that Sam's bus is late is 0.3. The probability that it rains in the morning is 0.65. The two events are independent. Find the probability that neither event happens.

Answer _____

8. Spinner A is numbered 1 to 5 and spinner B is numbered 1 to 8. Both are fair and are spun once. Use a sample space diagram to find the probability that the total is 5.

Answer _____

9. A card is taken at random from cards numbered 1 to 24. Find the probability that the number is a square number.

Answer _____

10. P(Kai passes a maths quiz) = 0.8 and P(a dice shows an even number) = 0.6, and the events are independent. Bella says P(both) = 0.8 + 0.6 = 1.4. Explain the mistake and find the correct probability.

Answer _____