PROBABILITY: Probability Spaces

Recall that probability is often stated as a number between 0 and 1. It is also stated as a percentage between 0 and 100%. When finding probabilities, it is often helpful to subtract a known percentage from 100 or a known decimal from 1 to find out the missing

1. Two fair dice are rolled at the same time and their scores are added together.

a) Complete the probability space at the right for this event.

b) Find the probability that the sum of the two dice:

i) _____ equals 7

ii) _____ is 10

iii) _____ is more than 9

iv) _____ is even

v) _____ is less than 4

vi) _____ is odd

vii) _____ is a square #

viii) _____ is 15

ix) _____ is an integer

x) _____ is prime

	FIRST THROW						
SECOND THROW	+	1	2	3	4	5	6
	1						
	2						
	3						
	4						
	5						
	6						

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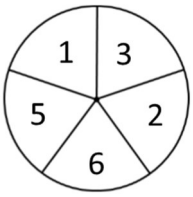
2. Jared plays a game with a fair five sectioned spinner and a fair coin. He spins the spinner and flips the coin.
   - If the coin lands on heads (H), his score is **two more** than the number on the spinner.
   - If the coin lands on tails (T), his score is the number on the spinner **tripled**.



a) Complete the table to show all he possible shows that Jordan can get.

	SPINNER						
COIN		**1**	**2**	**3**	**4**	**5**	**6**
	H						
	T						

b) What is the probability Jared gets a score of:

i) _____ 3

ii) _____ 10 or more

iii) _____ less than 3

iv) _____ a prime #

v) _____ 6 or 8

vi) _____ an odd #

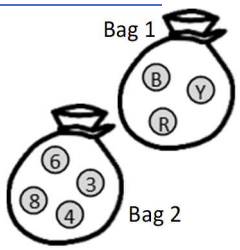
vii) _____ 12

viii) _____ an even #

ix) _____ 11

x) _____ less than 20

3. Two bags, 1 and 2, each contain counters that are equal size.
   - **Bag 1** contains a red counter, blue counter and yellow counter.
   - **Bag 2** contains counters labelled 3, 4, 6 and 8.



A counter is drawn at random from bag 1 and a counter is drawn at random from bag 2.
- If the counter from bag 1 is red (R), the number on the counter from bag 2 is doubled.
- If the counter from bag 1 is blue (B), one is added to the number on the counter from bag 2
- If the counter from bag 1 is yellow (Y), the number on the counter from bag 2 stays the same.

(a) Complete the table to show all possible scores

	BAG 1			
BAG 2		**R**	**B**	**Y**
	3			
	4			
	6			
	8			

b) What is the probability of scoring a:

i) _____ multiple of 2

ii) _____ 5 or more

iii) _____ 3

iv) _____ a prime #

v) _____ less than 10

vi) _____ 6