Data - Probability Trees

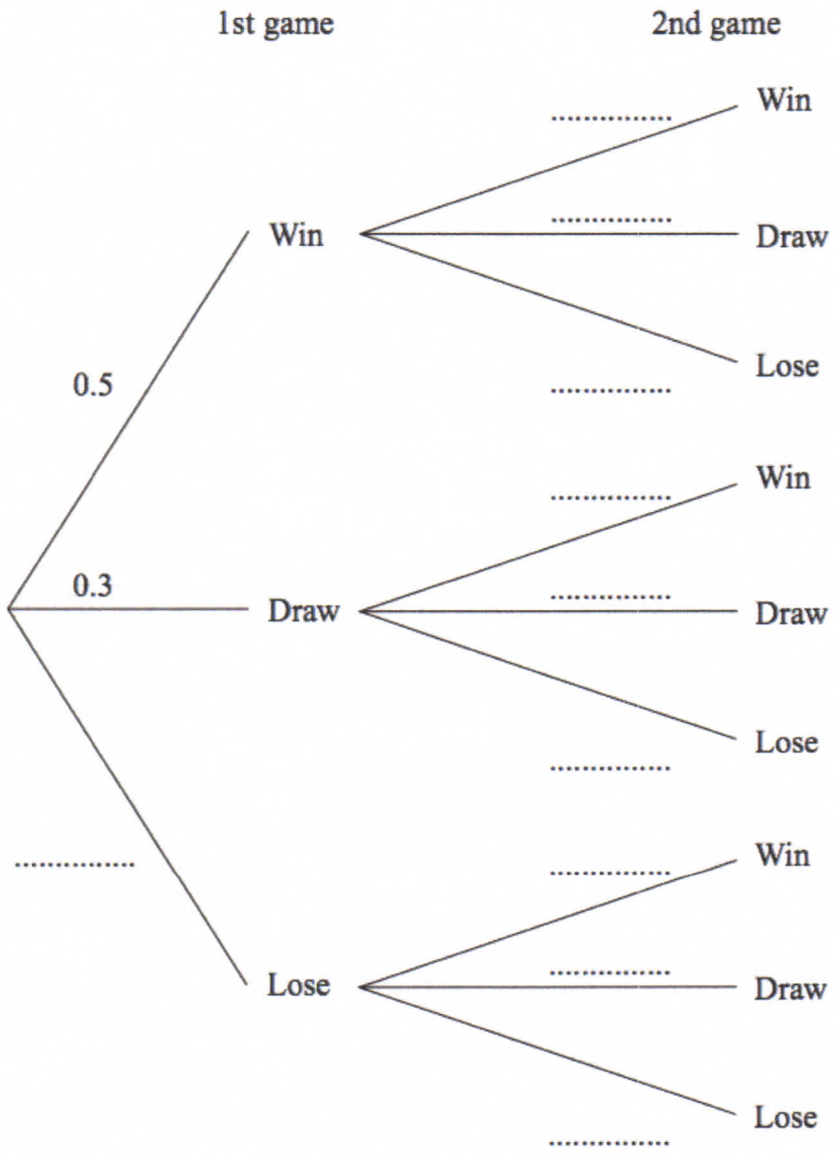
Q1

In a game of chess, a player can either win, draw or lose.

The probability that Vishi wins any game of chess is 0.5
The probability that Vishi draws any game of chess is 0.3

Vishi plays 2 games of chess.

(a) Complete the probability tree diagram.



(2)

(b) Work out the probability that Vishi will win both games.

.....

(2)

Data - Probability Trees

Q2

There are 3 orange sweets, 2 red sweets and 5 yellow sweets in a bag.

Sarah takes a sweet at random.
She eats the sweet.
She then takes another sweet at random.

Work out the probability that both the sweets are the same colour.

.....

(Total 4 marks)

Data - Probability Trees

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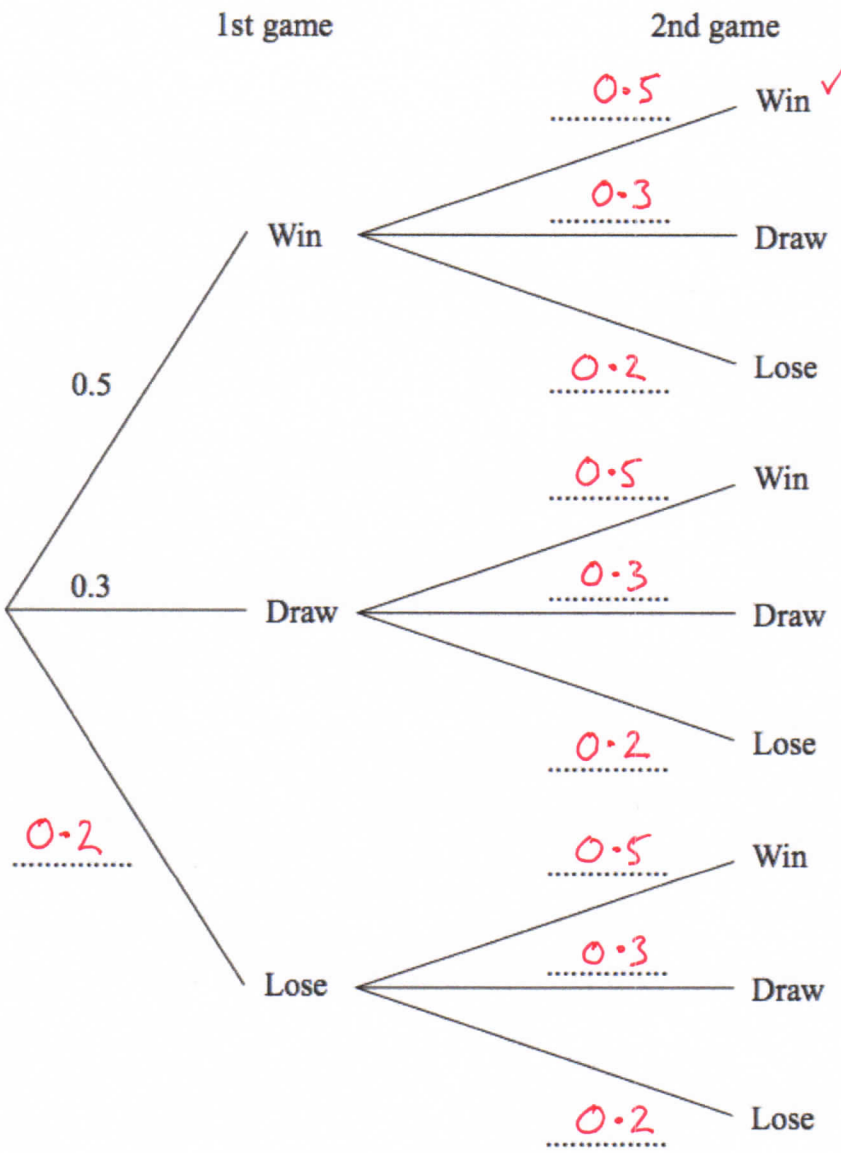


0.5 x 0.5 = 0.25 ✓

(2)

(b) Work out the probability that Vishi will win both games.

0.5 x 0.5 = 0.25

0.25

(2)

Data - Probability Trees

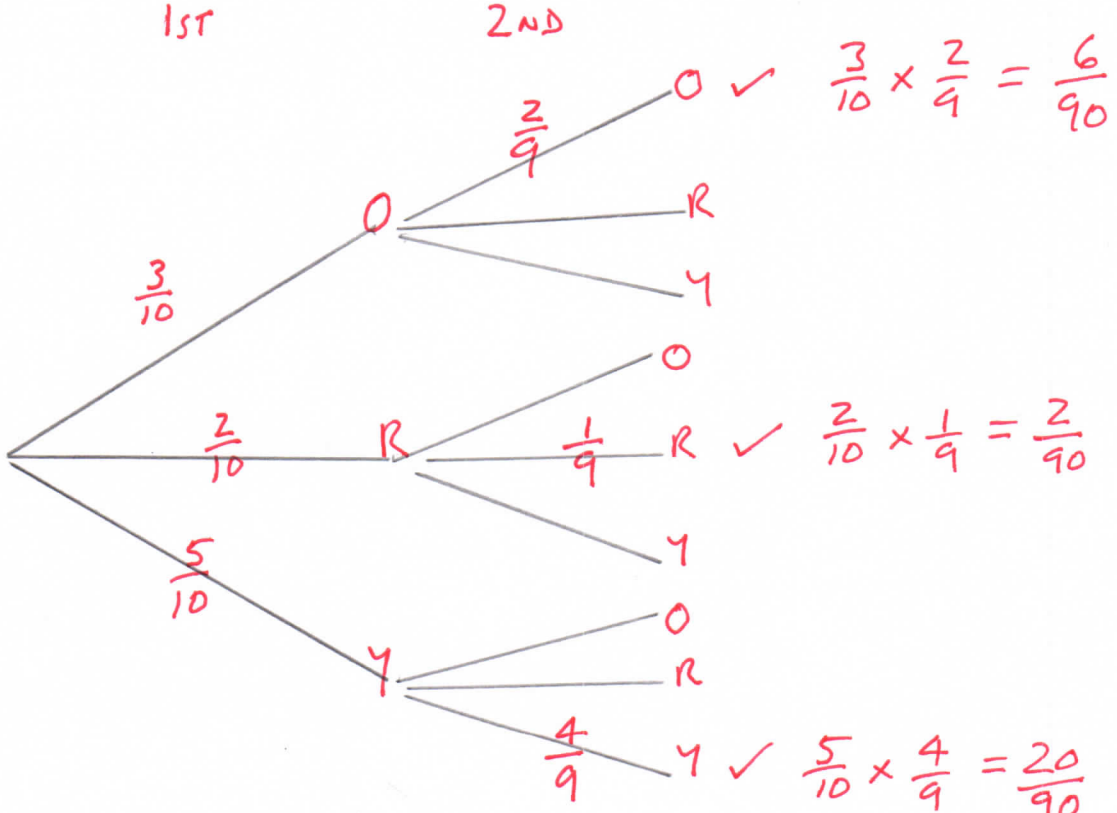
Q2

There are 3 orange sweets, 2 red sweets and 5 yellow sweets in a bag.

Sarah takes a sweet at random.
She eats the sweet.
She then takes another sweet at random.

10 sweets at first
then 9 when one is eaten

Work out the probability that both the sweets are the same colour.



Prob (Both same colour)

= Prob (OO or RR or YY) = $\frac{6}{90} + \frac{2}{90} + \frac{20}{90} = \frac{28}{90}$

$\frac{28}{90}$ (or $\frac{14}{45}$)

.....

(Total 4 marks)