1. Barnaby is attending a summer camp.

   One day every camper must choose a sport and a craft.

Sport	Craft
Football	Drawing
Running	Mosaic
Zumba	Origami

   Write down all the possible combinations

   The first one has been done for you.

   (Football, Drawing)...

   ....

2. Hamid spins a 4-sided spinner and a 10-sided spinner.

   The sides of the 4-sided spinner are labelled 1, 2, 3 and 4.

   The sides of the 10-sided spinner are labelled 1, 2, 2, 3, 3, 3, 4, 4, 4 and 4.

   10-sided spinner

	1	2	2	3	3	3	4	4	4	4
1										
2										
3										
4										

   (4-sided spinner)

   Work out the probability that Hamid gets a double.

   {This means that both spinners get the same score}

3.   3. ....
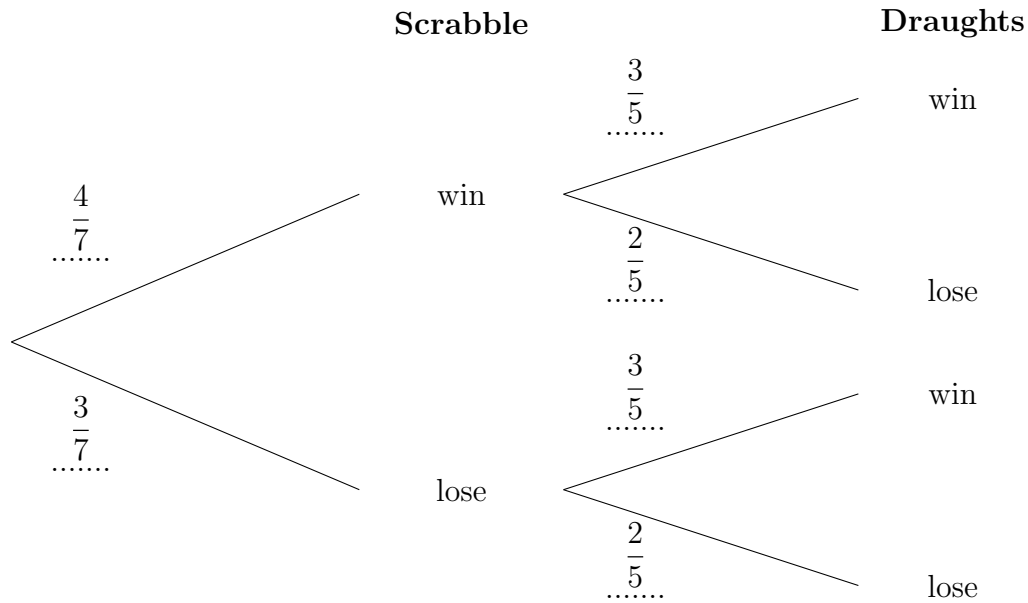
4.   4. ....

5. Abdirahmen will play two games in a competition.

   He will play scrabble where his probability of winning is $\dfrac{4}{7}$

   Then he will play draughts where his probability of winning is $\dfrac{3}{5}$

   Scrabble   **Draughts**

   Work out the probability of Abdirahmen losing at scrabble and winning at draughts.
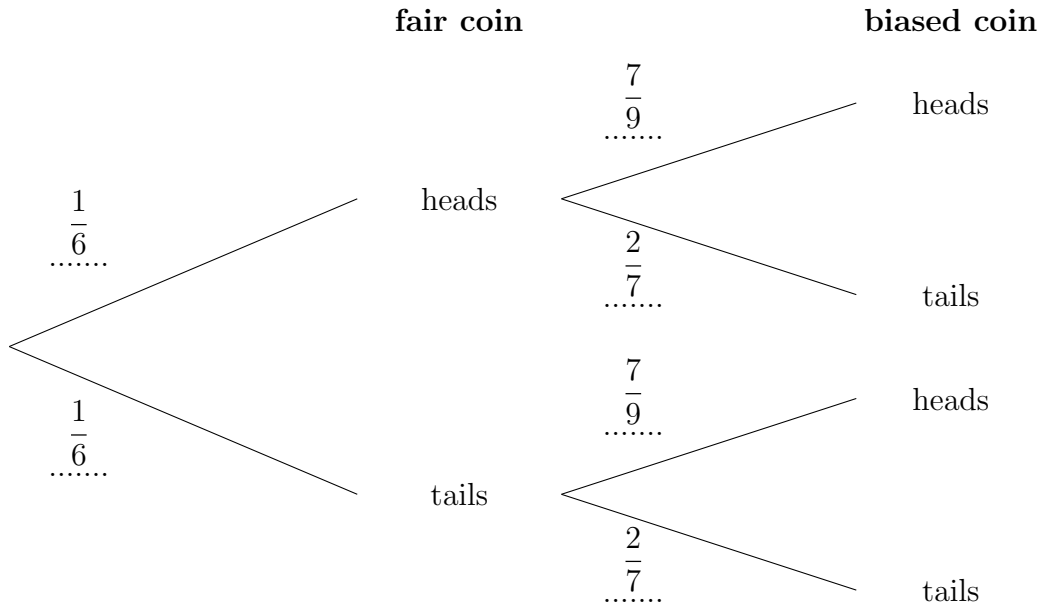
6. (a) Wren will throw 2 coins.

One coin is a fair coin.

The other coin is a biased coin.

The probability of getting a head with the biased coin is $\dfrac{7}{9}$

She draws this probability tree diagram.

The diagram is **not** correct.

fair coin   **biased coin**

$\dfrac{7}{9}$
....
heads

$\dfrac{1}{6}$
....
heads

$\dfrac{2}{7}$
....
tails

$\dfrac{7}{9}$
....
heads

$\dfrac{1}{6}$
....
tails

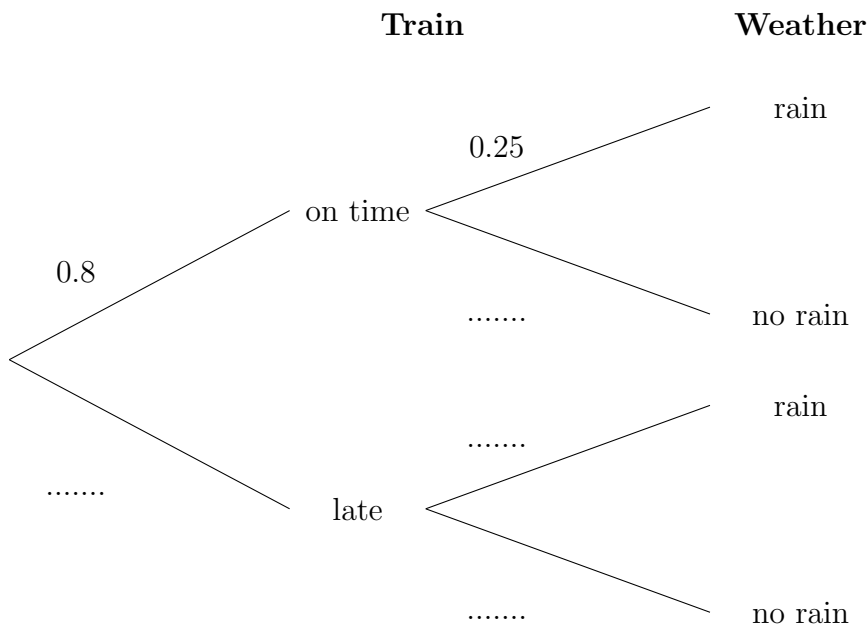$\dfrac{2}{7}$
....
tails

Write down **two** things wrong with the probability tree diagram.

(b) Zoey catches a train to work and then runs home.

The probability that the train is on time is 0.8

The probability that it rains when she is going home is 0.25

(i) Complete the probability tree diagram.

Train   **Weather**

0.25
rain

on time

0.8

....
no rain

....
rain

....
late

....
no rain

(ii) Work out the probability that her train is on time and it doesn't rain.