

For part a) of the question, draw the tree diagram.

For part b), find the probability of the event described.

1)

a) Tan flips a coin and it lands heads up. He flips a coin again and it lands on tails.

b) What is the probability it will land on tails on the next flip?

2)

a) Jonathan has three eyeshadows in their bag: two pink and one gold. They reach in twice to find the eyeshadow they want, replacing them each time, and pull one out at random each time. Draw the tree diagram.

b) What is the probability they pull out two eyeshadows of the same colour?

3)

a) A fair spinner has five equal sections numbered 1, 2, 3, 4 and 5

A playlist (on random shuffle, with no repeated songs) has 2 Ariana Grande, 1 Lizzo and 3 Nicki Minaj tracks.

The spinner is spun.

If the spinner shows an even number, the playlist is started.

b) What is the probability of getting an even number and an Ariana Grande track?

4)

a) There are 7 hats in a box. The Fab 5 are asked to select a hat at random which they'll have to wear that episode - the hats are not replaced. Antoni wants a hat which is purple or with a feather. In the box, there are 2 brown hats without a feather, 3 white hats with a feather, 1 purple no-feathered hat and 1 purple hat with a feather. Antoni is second in line to select his hat.

b) Work out the probability that he'll get a hat he wants.