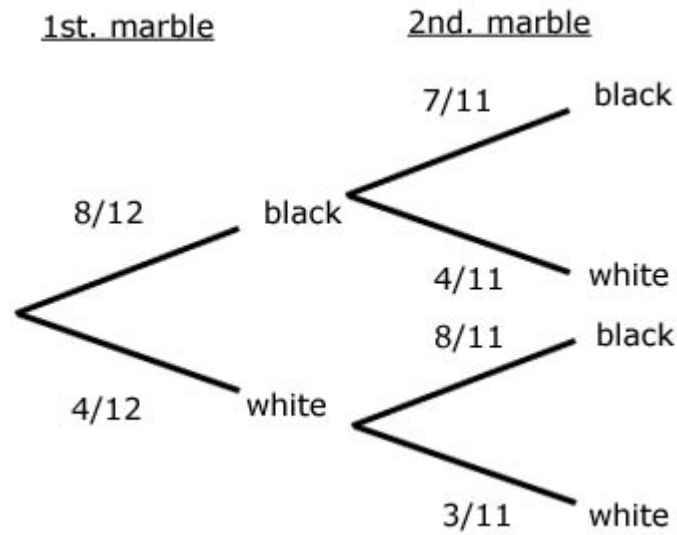


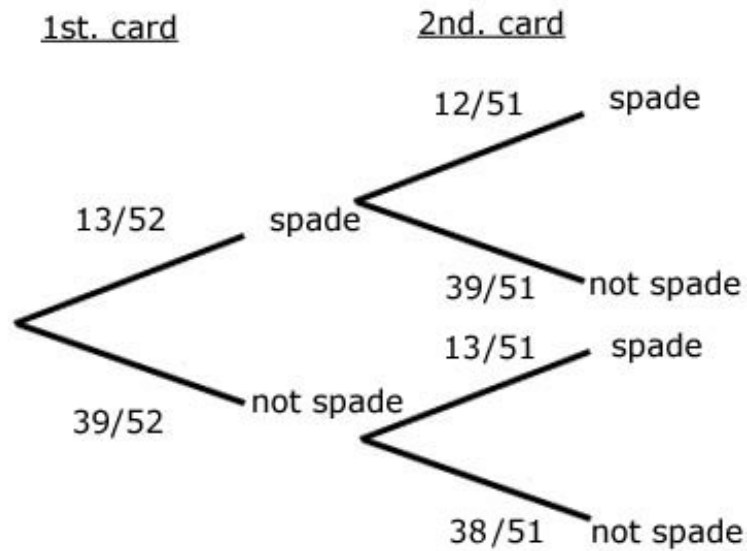
Illustrate each question with a 'tree diagram'.

1. A cloth bag contains 8 black marbles and 4 white marbles. If two marbles are removed from the bag one after the other, what is the probability that: (answers to 3 d.p.)
  - (a) the first is black and the second white
  - (b) both are coloured black
  - (c) both are coloured white
2. Two cards are removed from a pack of cards, one after the other. What is the probability that: (answers to 3 d.p.)
  - (a) both cards are spades
  - (b) neither card is a spade
  - (c) only the second card is a spade
3. Two cards are removed from a pack of cards, one after the other. What is the probability that: (answers to 3 d.p.)
  - (a) one of the cards is an ace
  - (b) two aces are obtained
  - (c) no aces are obtained
4. An earthenware jar contains £1 in 2p coins and £10 in 50p coins. If two coins are taken from the jar at random, what is the probability that the value of the two coins is: (answers to 3 d.p.)
  - (a) 52p
  - (b) £1
  - (c) 4p
5. A child has a bag of coloured sweets consisting of 5 red sweets, 12 orange and 9 green. If the child eats 2 of the sweets one after the other, what is the probability that:  
Note in this question, **3** tree diagrams are required. (answers to 3 d.p.)
  - (a) the first sweet eaten was orange and the second red
  - (b) no red sweets were eaten
  - (c) both the eaten sweets were green in colour

1. (a) 0.242 (b) 0.424 (c) 0.091

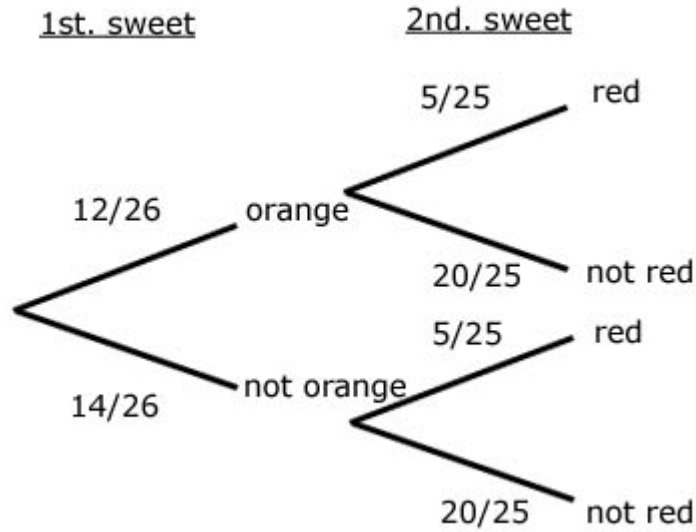


2. (a) 0.059 (b) 0.0559 (c) 0.191

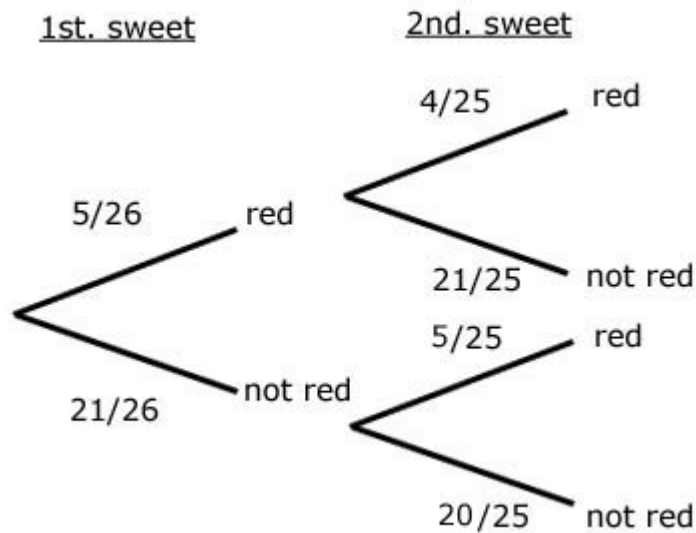




5. (a) 0.092



(b) 0.646



5. (c) 0.111

