Tree diagrams

Grade 5 | Foundation and Higher | 5 questions, 22 marks

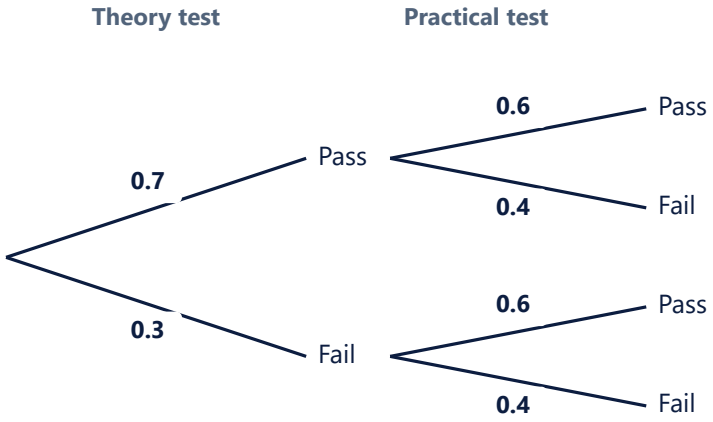
GCSE Statistics topic practice

Name: _____ **Date:** _____ **Score:** _____ **/ 22**

1 Priya is learning to drive. She has to take a theory test and a practical test. The probability tree diagram shows the probabilities that she passes or fails each test.

a. Write down the probability that Priya fails the practical test. (1)

b. Work out the probability that Priya passes both tests. (2)



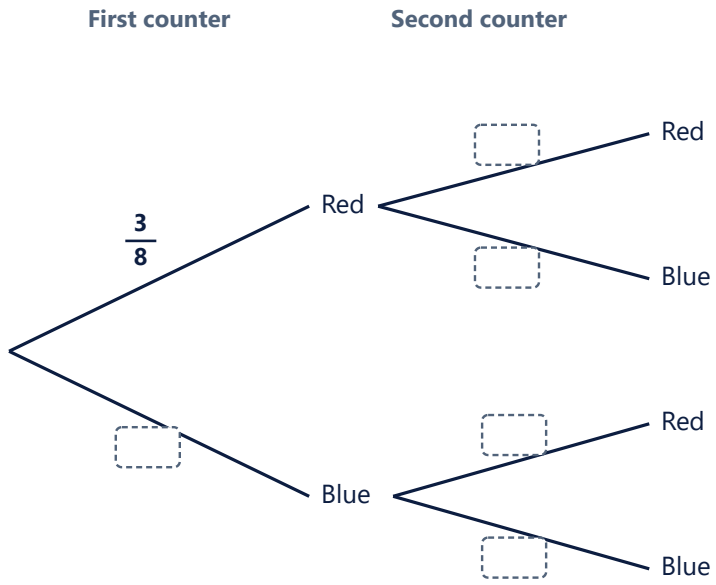
(3 marks)

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2 A bag contains 3 red counters and 5 blue counters. Kasia takes a counter at random, writes down its colour and puts it back in the bag. She then takes a second counter at random.

a. Complete the probability tree diagram. (2)

b. Work out the probability that the two counters are the same colour. (2)



(4 marks)

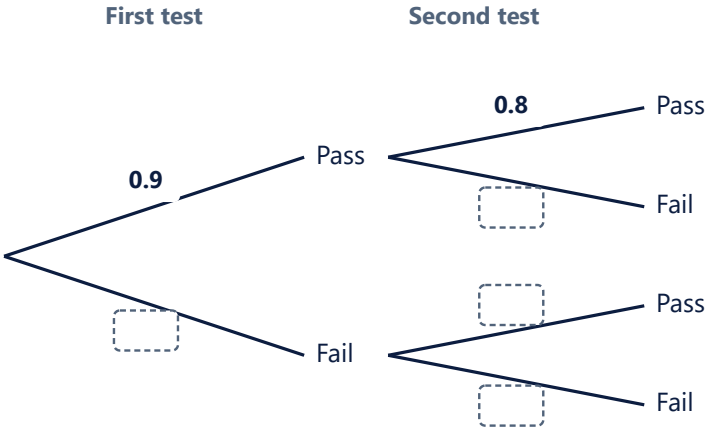
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3 A factory tests each smoke alarm twice. The probability that an alarm passes the first test is 0.9. The probability that an alarm passes the second test is 0.8. The results of the two tests are independent.

a. Complete the probability tree diagram. (2)

b. Work out the probability that an alarm passes both tests. (1)

c. Work out the probability that an alarm passes exactly one of the two tests. (2)



(5 marks)

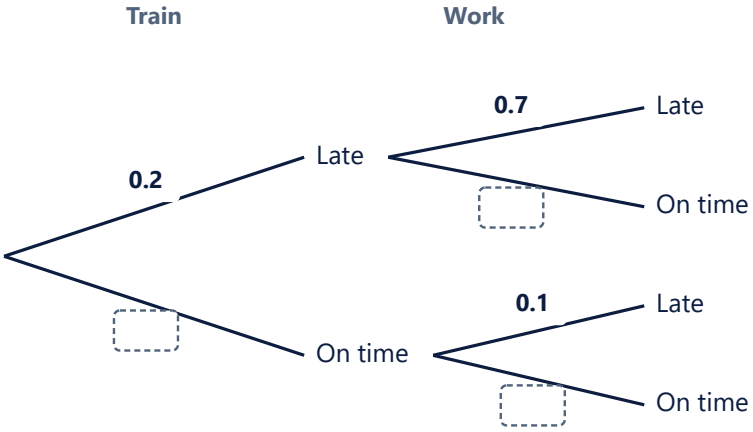
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4 The probability that Mia's train is late is 0.2. When her train is late, the probability that she is late for work is 0.7. When her train is on time, the probability that she is late for work is 0.1.

a. Complete the probability tree diagram. (2)

b. Work out the probability that Mia is late for work. (2)

c. Mia goes to work on 50 days. Work out an estimate for the number of days she is late for work. (1)



(5 marks)

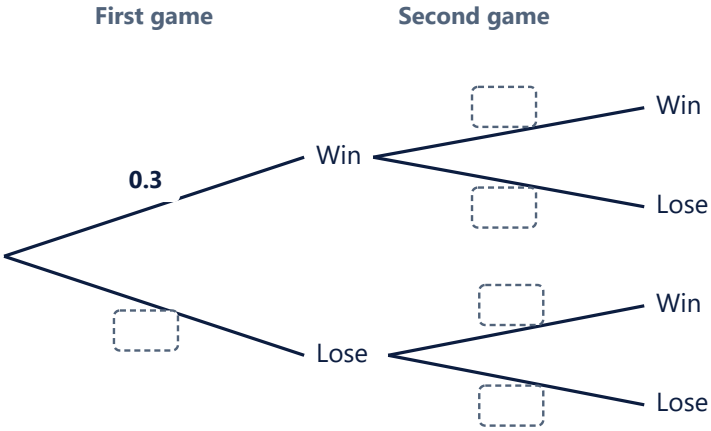
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5 Dev plays two different games at a fair. The probability that he wins the first game is 0.3. The probability that he wins both games is 0.12. The results of the two games are independent.

a. Work out the probability that Dev wins the second game. (2)

b. Complete the probability tree diagram. (1)

c. Work out the probability that Dev wins at least one of the two games. (2)



(5 marks)

End of questions | Total 22 marks

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