**Probability - Tree Diagrams (2 independent events)**

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| **1)** The tree diagram below shows the outcomes of tossing a fair coin twice.Find the probability of getting two tails.      http://www.mathster.com/course/simgs/38178732254_1.png      | [1]   |
| **2)** A coin is tossed and a dice is thrown.Find the probability of getting tails and a 3.      http://www.mathster.com/course/simgs/38178732254_2.png      | [1]   |
| **3)** The tree diagram below shows the outcomes of choosing two marbles out of a jar that contains 6 red marbles and 4 green marbles.Note that the first marble is returned to the jar before the second is picked.Find the probability that one marble is red and the other is green.      http://www.mathster.com/course/simgs/38178732254_3.png      | [1]   |
| **4)** The tree diagram below shows the outcomes of picking two marbles out of a bag that contains 2 green marbles, 3 red marbles and 5 yellow marbles.Note that the first marble is returned to the bag before the second is picked.Find the probability that one marble is green and the other is red.      http://www.mathster.com/course/simgs/38178732254_4.png      | [1]   |
| **5)** A fair coin is tossed twice.Draw a tree diagram and use it to calculate the probability of a tail and a head.      | [1]   |
| **6)** A coin is tossed and a dice is thrown.Draw a tree diagram and use it to calculate the probability of heads and a 2.      | [1]   |
| **7)** One marble is picked out of a jar that contains 4 orange marbles and 7 purple marbles and returned to the jar.A second marble is then chosen from the same jar.Draw a tree diagram and use it to calculate the probability that both are purple.      | [1]   |
| **8)** Two marbles are picked out of a jar that contains 3 green marbles, 5 red marbles and 6 yellow marbles.Note that the first marble is returned to the jar before the second is picked.Draw a tree diagram and use it to calculate the probability that one is green and the other is red.      | [1]   |

**Solutions for the assessment Probability - Tree Diagrams (2 independent events)**

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| **1)** P(two tails) = 1/4 | **2)** P(tails and a 3) = 1/12 |
| **3)** P(one marble is red and the other is green) = 12/25 | **4)** P(one marble is green and the other is red) = 3/25 |
| **5)** P(a tail and a head) = 1/2http://www.mathster.com/course/simgs/38178732254_5.png |
| **6)** P(heads and a 2) = 1/12http://www.mathster.com/course/simgs/38178732254_6.png |
| **7)** P(both are purple) = 49/121http://www.mathster.com/course/simgs/38178732254_7.png |
| **8)** P(one is green and the other is red) = 15/98http://www.mathster.com/course/simgs/38178732254_8.png |