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