Probability Name_____

Date_____

Determine whether the scenario involves independent or dependent events. Then find the probability.

1) A basket contains four apples and six peaches. You randomly select a piece of fruit and then return it to the basket. Then you randomly select another piece of fruit. The first piece of fruit is an apple and the second piece is a peach.

2) There are six nickels and four dimes in your pocket. You randomly pick a coin out of your pocket and then return it to your pocket. Then you randomly pick another coin. The first coin is a nickel and the second coin is a dime.

3) A box of chocolates contains five milk chocolates and six dark chocolates. You randomly pick a chocolate and eat it. Then you randomly pick another piece. Both pieces are milk chocolate.

4) Your sock drawer has six white socks, four brown socks, and two black socks. You randomly pick two socks and get a matching pair of black socks.

5) There are five nickels and four dimes in your pocket. You randomly pick a coin out of your pocket and then return it to your pocket. Then you randomly pick another coin. Both times the coin is a nickel.

6) You flip a coin twice. The first flip lands heads-up and the second flip also lands heads-up.

7) You flip a coin twice. The first flip lands tails-up and the second flip also lands tails-up.

8) You flip a coin twice. The first flip lands heads-up and the second flip lands tails-up.

9) A cooler contains thirteen bottles of sports drink: five lemon-lime flavored, five orange flavored, and three fruit-punch flavored. You randomly grab a bottle. Then you return the bottle to the cooler, mix up the bottles, and randomly select another bottle. The first time, you get a lemon-lime drink. The second time, you get a fruit-punch.

10) Your sock drawer has six white socks, two brown socks, and two black socks. You randomly pick a sock and put it on your left foot and then pick another sock and put it on your right foot. You leave the house with a white sock on your left foot and a brown sock on your right foot.

11) There are seven nickels and seven dimes in your pocket. You randomly pick a coin out of your pocket and then return it to your pocket. Then you randomly pick another coin. Both times the coin is a nickel.

12) Your sock drawer has four white socks, six brown socks, and six black socks. You randomly pick two socks and get a matching pair of black socks.

Answers to

1) Independent; $\frac{6}{25} = 0.24$

2) Independent; $\frac{6}{25} = 0.24$

3) Dependent; $\frac{2}{11} \approx 0.182$

4) Dependent; $\frac{1}{66} \approx 0.015$

5) Independent; $\frac{5}{9} \approx 0.556$

6) Independent; $\frac{1}{4} = 0.25$

7) Independent; $\frac{1}{4} = 0.25$

8) Independent; $\frac{1}{4} = 0.25$

9) Independent; $\frac{15}{169} \approx 0.089$

10) Dependent; $\frac{2}{15} \approx 0.133$

11) Independent; $\frac{1}{2} = 0.5$

12) Dependent; $\frac{1}{8} = 0.125$