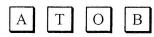6. A coin and a die are tossed. What is the probability of getting a head on the coin and a 4 on the die?

   A $\frac{1}{24}$

   B $\frac{1}{12}$

   C $\frac{1}{10}$

   D $\frac{1}{6}$

7. Franco has a bag with four letter tiles in it. All of the tiles are the same size and shape, as shown below.

   | A | T | O | B |

   One face of each tile has a letter on it, and the other faces are blank.

   Franco will select a tile at random, record the letter, and put the tile back. If he does this two times, what is the probability that Franco will select a T and then a B?

   A $\frac{1}{16}$

   B $\frac{1}{12}$

   C $\frac{1}{4}$

   D $\frac{1}{2}$

8. Based on their previous records, there is a $\frac{2}{3}$ probability that the Wildcats baseball team will beat their crosstown rivals, the Cornhuskers. In a three-game series, what is the probability that the Wildcats will win all three?

   A $\frac{4}{9}$

   B $\frac{2}{3}$

   C $\frac{8}{27}$

   D $\frac{19}{27}$

9. A bag of marbles contains three blue, one black, and four yellow marbles. If two marbles are chosen at random without replacement, what is the probability that both marbles will be yellow?

   A $\frac{3}{14}$

   B $\frac{7}{56}$

   C $\frac{1}{3}$

   D $\frac{1}{4}$

10. Henry's dresser drawer has many loose socks: 5 gray, 5 black and 6 white. If two socks are randomly pulled out without replacement, what is the probability that both socks will be white?

   A $\frac{3}{40}$

   B $\frac{3}{20}$

   C $\frac{3}{10}$

   D $\frac{1}{8}$