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1. You draw a fruit from a bag containing 3 apples and 5 oranges. You do not put the fruit back in the bag and you draw a new fruit.
With or without a probability tree, find the probability of drawing two different fruits?

2. A game of darts has two square targets below.


Target B


If a dart is thrown at random, the probability that it will hit a black area is the same for both targets. How long is each side of Target B?
3. During a contest, participants were required to perform the following task. They had to throw darts at one of two targets. (A dart had to hit either the target or the backboard to count as a throw.) The targets are illustrated below.
Which target gave the highest probability of success?


50 cm


50 cm
4. Emma tosses a coin and then chooses a marble from a bag containing 5 blue marbles, 3 red marbles and 2 green marbles.
What is the probability that Emma will obtain a head on the toss and will draw a red marble?
A) $\frac{3}{20}$
B) $\frac{4}{12}$
C) $\frac{8}{10}$
D) $\frac{3}{14}$
5. Amanda, Brigitte, Claire, Diane and Elsa are all equally qualified athletes. Only two of them will be selected to attend the track meet in Québec City.
Their names will be drawn at random.
What is the probability that Brigitte will NOT be selected?
A) $\frac{1}{20}$
B) $\frac{1}{5}$
C) $\frac{3}{5}$
D) $\frac{2}{3}$
6. The ratio of the volumes of two similar solids is 125 .

What is the ratio of their areas?
The ratio of their areas is $\qquad$ .
7. A teacher has a class of 26 students: 14 girls and 12 boys.

The teacher has two prizes to give away and decides to put all the students' names into a bowl.
The teacher will then draw 2 names. (Note: The name of the first winner is not put back into the bowl for the second draw.)
What is the probability that both prizes will be won by boys?
The probability that both prizes will be won by boys is: $\qquad$ .
8. Virginia is a member of the GOLDEN TUNES CD Club. The client number on her membership card is A3095.
All client numbers have the following characteristics:
1st character: One of the first ten letters of the alphabet
2nd character: A digit (0 to 9)
3rd character: 0 or 1
4th character: A digit representing an odd number
5th character: A digit representing a number greater than 3
How many different membership cards will the GOLDEN TUNES CD Club be able to make using these characteristics?

The GOLDEN TUNES CD Club can make a maximum of $\qquad$ membership cards.

