A Selection of Word Problems for Probability & Odds
Probability of success = P(?) Probability of failure = P*(?)
Failure is defined as <u>not</u> getting something!

1. A box contains 6 marbles: 1 Red, 2 White, 3 Blue. If a marble is randomly drawn from the box, what is the probability that is will be white?

   Box contains 6 marbles Box contains 2 white marbles P(w) = 2/6

2. A spinner contains 5 equal regions: 3 regions contain A,B,C and 2 regions contain 1,2 If the spinner is turned, what is the probability that a (Letter region) will stop at the top?

   Spinner has 5 regions with 3 Letter & 2 Number regions P(L) = 3/5 P*(L) = 2/5
   Odds of a (Letter) region stopping at the top is O_L (3/5 / 2/5) = 3 to 2

3. A cup contains 7 coins: 4 are dimes, 2 are nickels, 1 is a penny. If a coin is randomly Drawn from the cup, what is the probability that it is not a nickel?

   Cup contains 7 coins Cup contains 5 coins not nickels P*(n) = 5/7

4. A large wall contains 4 equals regions: 1 region is White, 3 regions are Black. If a dart is thrown at the wall and hits the wall, what is probability of the dart hitting green?

   Square contains 4 regions Square contains no green regions P(g) = 0

5. A box contains 6 marbles: 1 Red, 2 White, 3 Blue. If a marble is randomly drawn from the box, what is the probability that is will be red?

   Box contains 6 marbles Box contains 1 red marbles P(w) = 1/6

6. A spinner contains 5 equal regions: 3 regions contain A,B,C and 2 regions contain 1,2 If the spinner is turned, what is the probability that a (Number) will stop at the top?

   Spinner has 5 regions with 3 Letter & 2 Number regions P(N) = 2/5 P*(N) = 3/5
   Odds of a (Number) region stopping at the top is O_N (2/5 / 3/5) = **3 to 2**

7. A cup contains 7 coins: 4 are dimes, 2 are nickels, 1 is a penny. If a coin is randomly Drawn from the cup, what is the probability that it is not a nickel?

   Cup contains 7 coins Cup contains 5 coins not a penny P*(n) = 6/7

8. A large wall contains 4 equals regions: 1 region is White, 3 regions are Black. If a dart is thrown at the wall and hits the wall, what is probability of the dart hitting W or B?

   Wall contains 4 regions Wall is colored with W & B P(c) = 1