

**A Selection of Word Problems for Probability & Odds**  
**Probability of success = P(?)      Probability of failure = P\*(?)**  
**Failure is defined as not 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 it 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  $O_L (3/5 / 2/5) = 3 \text{ to } 2$

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 equal 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 it 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  $O_N (2/5 / 3/5) = 3 \text{ to } 2$

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 equal 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       $P(c) = 1$