

ALGEBRA II PROBABILITY

1. Joanna has 8 blue socks, 10 green socks, 5 black socks and 7 white socks in a drawer. What is the probability that she randomly pulls out:

a) A green sock? $P(\text{green}) = \underline{\hspace{2cm}}$

b) A white sock? $P(\text{white}) = \underline{\hspace{2cm}}$

c) A color other than green or white? $P(\text{not green, not white}) = \underline{\hspace{2cm}}$

d) A blue, a green, or a black sock? $P(\text{blue, green or black}) = \underline{\hspace{2cm}}$

2. A deck of UNO cards contains the following cards: 11 blue, 11 red, 11 green, and 11 yellow. Each color is numbered 0 - 10. Jack randomly draws one card. What is the probability that he draws:

a) A yellow card? $P(\text{yellow}) = \underline{\hspace{2cm}}$

b) A card with a number greater than 6? $P(\# > 6) = \underline{\hspace{2cm}}$

c) A blue card with a number less than 4? $P(\text{a blue} < 4) = \underline{\hspace{2cm}}$

d) A red or a green card with the number 5? $P(\text{red 5 or green 5}) = \underline{\hspace{2cm}}$

3. A set of blocks, numbered 1 - 25, are tossed in a box. Pamela randomly pulls out one block. What is the probability that she pulls out:

a) the number 1? $P(1) = \underline{\hspace{2cm}}$

b) a multiple of 3? $P(\text{multiple of 3}) = \underline{\hspace{2cm}}$

c) a factor of 20? $P(\text{factor of 20}) = \underline{\hspace{2cm}}$

d) a number not more than 20 $P(\# \text{ not more than } 20) = \underline{\hspace{2cm}}$

4. Using the spinner below, what is the probability of spinning:

a) an even number? $P(\text{even}) = \underline{\hspace{2cm}}$

b) a number greater than 4? $P(\# > 4) = \underline{\hspace{2cm}}$

c) a letter? $P(\text{a letter}) = \underline{\hspace{2cm}}$

d) any letter or a number less than 5? $P(\text{a letter or a } \# < 5) = \underline{\hspace{2cm}}$

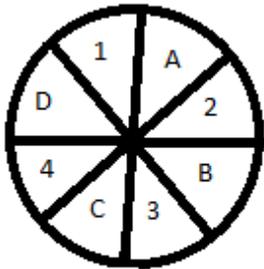
5. As Bart was staring at his BUTTERFINGER, he began to contemplate the probabilities that existed. Help Bart figure out the probability of randomly selecting, from the letters in his candy bar, the following:

a) $P(R) =$ _____

b) $P(\text{vowel}) =$ _____

c) $P(\text{consonant}) =$ _____

d) A letter contained in the word "tiger"? $P(T, I, G, E, R) =$ _____



6. In a board game involving the rolling of dice, what is the probability of rolling:

a) $P(\text{three 6's in a row}) =$ _____

b) $P(\text{an odd, then an even}) =$ _____

c) $P(\text{a 1, then a 1, then not a 1}) =$ _____

d) $P(\text{a number} < 3, \text{ then an even \#}) =$ _____

7. A sports memorabilia store has a grab bag that contains 10 antique baseball cards, 4 Hall of Fame Basketball cards and 6 BYU football cards. Little Johnny get to randomly select exactly 3 cards to keep, if he pays the owner \$20 for the cards. Determine the following probabilities:

a) $P(3 \text{ Hall of Fame Basketball cards})$

b) $P(2 \text{ Antique Baseball cards and } 1 \text{ BYU card})$

c) $P(1 \text{ of each type of card})$

8. A deck of cards contains 5 green cards, 5 gold cards and 5 cardinal cards. If Buford the Bruin selects 2 cards, what is the probability of:

a) $P(\text{Mountain View colors})$

b) $P(\text{one gold, one cardinal})$

c) $P(\text{two green cards})$

d) $P(\text{a Mountain View color, not a Mountain View color})$