Adv. Alg 2 Chapter 11 review #1

1. In how many ways can you arrange the letters of *Ponderosa*?

2. From a class of 32 students, in how many ways can you choose a committee of 5?

3. How many passwords of 2 letters followed by 3 digits can be created by using only vowels and having no digits repeat?

4. Larry needs to choose a President, Vice President, and Secretary for his new club of 15 members. How many ways can he choose these positions?

5. Nine children are to be seated on a merry-go-round that holds nine people. In how many different arrangements can they be seated?

6. Seventeen runners are in a race. In how many different wasy can 14th, 15th, 16th, and 17th place be awarded? (Assuming no on ties)

7. Nick wants to make a smoothie using 3 different kinds of fruits.   There are 6 different types of fruits on the table. How many different kinds of smoothies can he make if he can only choose 1 fruit of each type?

8. There are 3 Snickers , 2 Baby Ruth, and 7 Butterfingers in a candy bowl on Grandma's table. If you close your eyes and choose one, what are the chances that it will be a Snickers? What's the probability that it will NOT be a Baby Ruth?

9. In how many ways can 3 males and 3 females be seated in a row if the genders must alternate down the row?

AA2 Wk 9 block

1. $\frac{9!}{2!} = 181{,}440$

2. $_{32}C_5 = 201{,}376$

3. $5 \cdot 5 \cdot 10 \cdot 9 \cdot 8 = 18{,}000$

4. $_{15}P_3 = 2730$

5. $(9-1)! = 40{,}320$

6. $_{17}P_4 = 57{,}120$

7. $_6C_3 = 20$

8. 3/12=1/4; 10/12=5/6

9. $(3 \cdot 3 \cdot 2 \cdot 2 \cdot 1 \cdot 1)X2 = 72$