

FRS HW #2

1.) a.) 9 distinct letters, so

$$9! = 362,880$$

b.) 6 letters, 2 e's, so

$$\frac{6!}{2!} = 360$$

c.) 6 letters, 3 A's, so

$$\frac{6!}{3!} = 120$$

$$2.) \frac{15}{P.} \cdot \frac{14}{V.P.} \cdot \frac{13}{S.} \cdot \frac{12}{T.} \cdot \frac{11}{H.} = P(15, 5)$$
$$= 360,360$$

3.) Use formula from class:

a.) 3 elements, so $2^3 = 8$

b.) 20 elements, so $2^{20} = 1,048,576$