1. **PARKS** The table below shows the Parks and Recreation Department classes and the number of participants aged 7–9.

Age	Swimming	Drama	Art
7	40	35	25
8	30	21	14
9	20	44	11

What is the probability that a participant chosen at random is in Drama or is an 8-year-old?

2. . If you randomly selected a permutation of the letters E, O, G, M, E, R, T, Y, what is the probability they would spell "geometry"?

3. . Three of the 10 people in the Latin club are chosen at random to wear togas to school to promote the club. What is the probability that Joseph, Heidi, and Katy are chosen?

   A $\dfrac{3}{120}$ B $\dfrac{1}{40}$ C $\dfrac{1}{120}$ D $\dfrac{1}{5040}$

4. Find the number of possible outcomes for a weekend camping trip from 4 places to camp, 2 types of sleeping bags, 3 types of tents, and 5 different meal plans.

   A 120   B 90   C 4!   D 4 − 2!

5. . **ENGINEERING** An engineer is analyzing three factors that affect the quality of semiconductors: temperature, humidity, and material selection. There are 6 possible temperature settings, 4 possible humidity settings, and 6 choices of materials. How many combinations of settings are there?

6. . **SPELLING** How many distinguishable ways are there to arrange the letters in the word "bubble"?

7. **MULTIPLE CHOICE** Naoko, Keisha, and Joshua compared the music on their MP3 players. Find the probability that a selected song is country given that it is not on Naoko's player.

Person	Rock	Country	R & B
Naoko	521	316	44
Keisha	119	145	302
Joshua	244	4	182

   F 17.2%   G 24.8%   H 35.9%   J 15.0%

8.)**SCHOOL CLUBS** King High School tallied the number of males and females that were members of at least one after school club. Find each probability.

   a. A student is a member of a club given that he is male.

	Clubs	No Clubs
Male	156	242
Female	312	108

9. In how many ways can you arrange 11 shirts hanging in your closet?

10. Expand this binomial using combinations: $(5x - 2)^4$