Discussion questions:

1. <u>Steve is very shy and withdrawn, invariably helpful, but with little interest in people, or in the world of reality. A meek and tidy soul, he has a need for order and structure, and a passion for detail.</u> Steve is among a group, which is consist of 30% librarian and 70% farmer. **What is the probability that Steve is a librarian or a farmer?**

    Librarian:_____
    Farmer:_____

2. Dick is a 30 year-old man. He is married with no children. A man of high ability and high motivation, he promises to be quite successful in his field. He is well liked by his colleagues. Dick is among a group, which is consist of <u>30%</u> engineer and <u>70%</u> lawyer. **What is the probability that Dick is an engineer or a lawyer?**

    Engineer:_____
    Lawyer:_____

3. A certain town is served by two hospitals. In the larger hospital about <u>45 babies</u> are born each day, and in the smaller hospital about <u>15 babies</u> are born each day. About 50 percent of all babies are boys. However, the exact percentage varies from day to day. Sometimes it may be higher than 50 percent, sometimes lower. For a period of 1 year, each hospital recorded the days on which more than 60 percent of the babies born were boys. **Which hospital do you think recorded more such days?**

    a. The larger hospital
    b. The smaller hospital
    c. About the same (that is, within 5 percent of each other)

4. Imagine an urn filled with balls, of which 2/3 are of one color and 1/3 of another. Hongji has drawn 5 balls from the urn, and found that 4 were red and 1 was white. Lada has drawn 20 balls and found that 12 were red and 8 were white. **Which of the two individuals should feel more confident that the urn contains 2/3 red balls and 1/3 white balls, rather than the opposite?**

    a. Hongji
    b. Lada

5. Mark is tossing a coin for heads or tails (50% chance for each event). Which sequence is more likely to occur?

(a) H-T-H-T-T-H   vs.   (b) H-H-H-T-T-T

(b) H-H-H-T-T-T   vs.   (c) H-H-H-T-H

(a) H-T-H-T-T-H   vs.   (c)H-H-H-T-H

6. Phillip observed a roulette wheel hit 5 consecutive reds. Now Phillip has to bet to red or black. What should he choose? (it's a random process to hit red or black)

7. Bet on one of the following two events:

(a) Drawing a red marble from a bag containing 50 percent red marbles and 50 percent white marbles
(b) Drawing a red marble seven times in succession, which replacement, from a bag containing 90 percent red marbles and 10 percent white marbles

8. What is the number of African countries in the United Nations?
   Please answer like the following: 10 countries

   Answer: _____

SPEED QUIZ

9. Consider a group of 10 people who form committees of 2 members. How many committees can be formed?

   ***IMPORTANT: Answer this question within 5 seconds without calculation. Please write down team members' guess below.**

10. Answer **WITHIN 5 SECONDS** (don't calculate!!!). Write down team members' answers below.

    $8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 = ?$