



Q1/ Six cards are drawn from a pack of playing cards. Find the probability of :
(1) **four** are **aces** and **two** are **queen**? (2) **three** are **black numbers** and other are **read picture**? (3) **two** are **king** and **four** are **numbers**? .

Q2/ A school employ **75** teachers. The following table summarizes their length of service at the school, classified by gender.

	Less than 3 years	3 years to 8 years	More than 8 years	Total
Female	12	20	13	45
Male	8	15	7	30
Total	20	35	20	75

If a teacher is selected at random find probability of :

- 1- the teacher is a female.
- 2- the teacher is female, **given that** the teacher has **More than 8 years** service.
- 3- Show that whether or not the event of **selecting a female teacher** is **independent** of the event of **selecting a teacher with less than 3 years** service.

Q3/ **Urn A** contains **7** red marbles and **5** blue marbles, and **urn B** contains **4** red marbles and **6** blue marbles. (1) If a **marble** is drawn from **each urn**, what is the probability that they are **both of the same color**? (2) If **two marbles** are drawn from **each urn**, what is the probability that all **four marbles** are of the same color? (3) If we **select a Urn at random** and then draw a marble at random, What is the probability that a marble is a **red**?

Good Luck

Name