1. One card is drawn at random from a well-shuffled deck of 52 cards. Find the probability that the card drawn
   a) Is queen of hearts
   b) Is not a jack $\qquad$ (Ans: $\frac{1}{52}, \frac{12}{13}$)

2. Two dice are thrown simultaneously. Find the probability of getting:
   a) An even no as the sum
   b) The sum as a prime number
   c) A total of at least 10
   d) A doublet of an even number
   e) Same number on both dice
   $\qquad$ (Ans: $\frac{1}{2}, \frac{5}{12}, \frac{1}{6}, \frac{1}{12}, \frac{1}{6}$)

3. Two unbiased coins are tossed simultaneously. Find the probability of getting:
   a) Exactly 2 head   b) one head   c) at least one head
   d) At most one head   e) no head
   $\qquad$ (Ans: $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}, \frac{3}{4}, \frac{1}{4}$)

4. What is the probability that a leap year has 53 Tuesdays and 53 Mondays
   $\qquad$ (Ans: $\frac{1}{7}$)

5. A card is drawn at random from a well-shuffled deck of 52 cards. Find the probability of getting neither a red card nor a queen $\qquad$ (Ans: : $\frac{6}{13}$)

6. Find the probability that a number selected at random from the numbers 3,4,4,4,5,5,6,6,6,7 will be their mean $\qquad$ (Ans: $\frac{1}{5}$)

7. A single letter is selected at random from the word 'PROBABILITY'. Find the probability that it is a vowel $\qquad$ (Ans: $\frac{4}{11}$)

8. What is the probability that a non-leap year has 53 Mondays $\qquad$ (Ans: $\frac{1}{7}$)

9. Two different dice are tossed together. Find the probability that the product of the numbers on the top of the dice is 6 $\qquad$ (Ans: $\frac{1}{9}$)

10. Two different dice are tossed together. Find the probability
    a) Of getting a doublet
    b) Of getting a sum 10 of the numbers on the two dice $\qquad$ (Ans: $\frac{1}{6}, \frac{1}{12}$)

11. In a single throw of a pair of different dice, what is the probability of getting
    a) A prime number on each dice
    b) A total of 9 or 11 $\qquad$ (Ans: $\frac{1}{4}, \frac{1}{6}$)

12. There are 80 cards numbered from 1 to 80. One card is drawn at random from them. Find the probability that the number on the selected card is not divisible by 8

$$(\text{Ans: } \frac{7}{8})$$

13. A bag contains 18 balls out of which x balls are red.
    a) If one ball is drawn at random from the bag, what is the probability that it is red ball?
    b) If two more red balls are put in the bag, the probability of drawing a red ball will be $\frac{9}{8}$ times that of the probability of the red ball coming in part (a). Find the value of x

$$(\text{Ans: } \frac{x}{18}, x = 8)$$

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