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September 19, 2013

1 SECTION TITLE HERE

1. A box contains discs numbered 1 to 16. If a disc is selected at random, what is the probability that it is:
 - i. an odd number
 - ii. a multiple of 4
 - iii. an odd number or a multiple of four?
2. An unbiased six-sided die is thrown. Find the probability that the number obtained is:
 - i. Even
 - ii. prime
 - iii. Even or prime
3. A number is selected at random from the integers 1 to 30 inclusive. Find the probability that the number is
 - i. a multiple of 3
 - ii. a multiple of 5
 - iii. a multiple of 3 or a multiple of 5
4. A number is chosen at random from the whole numbers 1 to 12 inclusive. What is the probability that it is:
 - i. even
 - ii. divisible by 3
 - iii. even or divisible by 3
 - iv. not even or divisible by 3.
5. If two fair dice are thrown, what is the probability of getting
 - i. the same number on both dice
 - ii. a total of 8
 - iii. the same number on both dice or a total of 8?

6. A number is chosen at random from the whole numbers 1 to 30 inclusive. What is the probability that it is divisible by:
 - i. 3
 - ii. 5
 - iii. 3 or 5
 - iv. Not 3 or 5
7. In a group of 40 adults, 8 out of the 14 women and 2 out of the 26 men wear glasses. What is the probability that a person chosen at random
 - i. is a woman
 - ii. is a person who wears glasses
 - iii. is a woman or a person who wears glasses?
8. A Letter is selected at random from the word EXERCISES. Find the probability that the letter is:
 - i. I
 - ii. S
 - iii. A vowel
 - iv. A vowel or an S
 - v. Not a vowel or an S
9. A card is drawn at random from a pack of 52. Find the probability that the card drawn is:
 - i. a spade
 - ii. an ace
 - iii. a spade or an acde
 - iv. a red card or an ace?
10. A bag contains three blue discs, five white discs and four red discs. A discis chosen at random. Find the probability that the disc chosen is:
 - i. red
 - ii. blue or white
 - iii. red or white
 - iv. not red or white
11. two dice are thrown and their scores are added. 'A' is the event: the total score is 9
'B' is the event: the individual scores differ by 1. Find the probability of 'A' or 'B' occuring.
12. In a class of 20 students, four of the nine girls and three of the eleven boys play on the school hockey team. A student from the class is chosen at random. What is the probability that the student chosen is:

- i. On the Hockey team
 - ii. a boy
 - iii. a boy or on the hockey team
 - iv. a girl or not on the hockey team
13. The results of a traffic survey of colour and type of car are given in the table shown. One car is selected at random from this group. Find the probability that the car

	Saloon	Estate
White	68	62
Green	26	32
Black	6	6

- selected is
- i. a green estate car
 - ii. a saloon car
 - iii. a black car or an estate car
14. A card is selected at random from a pack of 52. Find the probability that the card is:
- i. a spade or a club
 - ii. a queen or a red card
 - iii. a heart or a red ten
 - iv. not a heart or a red ten.
15. Two dice are cast. What is the probability of getting
- i. a total of two or a total of six
 - ii. a total greater than nine or a total which is prime
16. Two unbiased six-sided dice, one red and the other blue, are thrown together. Calculate the probability that:
- i. The numbers are the same or the sum of the numbers is 10.
 - ii. The sum of the numbers is 8 or the difference between the two numbers is 2.
17. Of one hundred people in a sports club, 40
- i. Find the probability that a person chosen at random from the group is male and plays tennis.
 - ii. Find the probability that a person chosen at random from the group plays tennis.
18. A bag contains five red discs and three blue discs. The red discs are numbered 1, 2, 2, 3 and 3, while the blue discs are numbered 4, 5 and 5. A single disc is drawn at random from the bag. What is the probability that the disc is:
- i. red

- ii. even
 - iii. red or even
 - iv. neither red nor even
19. A bag contained 8 red, 12 blue and an unknown number of green beads. In a random draw the probability of drawing a green bead was $\frac{1}{5}$. How many green beads were in the bag at the start?
20. A bag contains five purple markers, four green markers and three black markers. The purple markers are numbered 1,2,3,4 and 5; the green markers are numbered 6,7,8, and 9; and the black markers are numbered 10,11 and 12. A single marker is drawn from the bag. What is the probability that the marker is:
- i. odd
 - ii. black
 - iii. black or odd
 - iv. purple or even
 - v. green or even
 - vi. not green or even
21. Of 100 tickets sold in a raffle, 40 were red, 30 were blue and 30 were green. If the winning ticket was drawn at random, find the probability that it was
- i. red
 - ii. not blue.
 - iii. Every red ticket is even-numbered and every blue ticket is odd-numbered. Of the green tickets 20 are even-numbered and 10 are odd-numbered. Find the probability that the winning ticket was green or even numbered.
22. i. Two tetrahedral (four-sided) dice both have sides numbered 1,2,3 and 4. What is the probability that the sum of the scores is
- (a) even
 - (b) prime?
- ii. Are these two events in (i) mutually exclusive? Justify your answer.
23. In a group of 200 people each individual is classified as either male or female and according to whether or not he/ she wears glasses. The numbers falling into the different categories are tabulated below:

	Not wearing glasses	Wearing glasses
Male	90	24
Female	66	20

If one person from the group is chosen at random, find the probability that this person is

- i. female and wearing glasses

- ii. male and not wearing glasses
- iii. female or wearing glasses
- iv. wearing glasses