

Q. 1

1.If you join all the vertices of a heptagon, how many quadrilaterals will you get?

- A.72
- B.36
- C.25
- D.35
- E.120

Q. 2

Four students have to be chosen 2 girls as the captain and vice-captain and 2 boys as captain and vice-captain of the school. There are 15 eligible girls and 12 eligible boys. In how many ways can they be chosen if Sunita is sure to be the captain?

- A.114
- B.1020
- C.360
- D.1848
- E.1500

Q. 3

A teacher prepares a test. She gives 5 objective type questions out of which 4 have to be answered. Find the total ways in which they can be answered if the first 2 questions have 3 choices and the last 3 have 4 choices.

- A.255
- B.816
- C.192
- D.100
- E.144

Q. 4

How many 5 digit numbers are there with distinct digits?

- A.144
- B.27216
- C.4386
- D.6432
- E.720

Q. 5

In how many ways can 15 students be seated in a row such that the 2 most talkative children never sit together?

- A. $14!.14!$
- B. $15.14!$
- C. $14!$
- D. $14! 13$
- E. $15!$

Q. 6

In a school 5 colours are allotted to each house. If the flag of Tagore House has to be a sequence of three blocks of different colours, then how many flags can they choose from?

- A.9
- B.27

- C.60
- D.20
- E.15

Q. 7

Find the number of words which can be formed by using the letters of the word EQUATION if each word has to start with a vowel.

- A.40320
- B.1260
- C.1080
- D.400
- E.25200

Q. 8

How many five digit numbers can be formed using the digits 0, 2, 3,4and 5, when repetition is allowed such that the number formed is divisible by 2 or 5 or both?

- A.100
- B.150
- C.3125
- D.1500
- E.125

Q. 9

A straight road runs from north to south. It has two turnings towards east and three turnings towards west. In how many ways can a person coming from east get on the road and go west?

- A.2
- B.3
- C.9
- D.6
- E.5

Q. 10

How many heptagons can be drawn by joining the vertices of a polygon with 10 sides?

- A.562
- B.120
- C.105
- D.400
- E.282

Q. 11

Four persons enter the lift of a seven storey building at the ground floor. In how many ways can they get out of the lift on any floor other than the ground floor?

- A.720
- B.1296
- C.1663
- D.360

- E.2500

Q. 12

Ten different letters of an alphabet are given. 2 of these letters followed by 2 digits are used to number the products of a company. In how many ways can the products be numbered?

- A.52040
- B.8100
- C.5040
- D.1000
- E.4000

Q. 13

If $P(2n+1, n-1) : P(2n-1, n) = 3:5$, find n.

- A.2
- B.4
- C.6
- D.8
- E.10

Q. 14

A polygon has 20 diagonals. How many sides does it have?

- A.12
- B.11
- C.10
- D.9
- E.8

Q. 15

A box contains 5 red and 4 blue balls. In how many ways can 4 balls be chosen such that there are at most 3 balls of each colour?

- A.132
- B.242
- C.60
- D.120
- E.240

Q. 16

Six points lie on a circle. How many quadrilaterals can be drawn joining these points?

- A.72
- B.36
- C.25
- D.15
- E.120

Q. 17

There are 3 children of a lady. In how many ways is it possible to dress them for a party if the first child likes 3 dresses, second likes 4 and the third likes 5 but the third child has out grown one of them? Each child has a different set of clothes.

- A.11
- B.10
- C.60
- D.48
- E.15

Q. 18

How many three-digit odd numbers can be formed from the digits 1, 3, 5, 0 and 8?

- A.25
- B.60
- C.75
- D.100
- E.15

Q. 19

Find the number of words formed by permuting all the letters of the word INDEPENDENCE.

- A.144
- B.1663200
- C.136050
- D.6432
- E.720

Q. 20

There are 12 children in a party. For a game they have to be paired up. How many different pairs can be made for the game?

- A.46
- B.24
- C.120
- D.66
- E.132

Q. 21

How many different differences can be obtained by taking only 2 numbers at a time from 3, 5, 2, 10 and 15?

- A.49
- B.1898
- C.1440
- D.4320
- E.720

Q. 22

In a class test there are 5 questions. One question has been taken from each of the 4 chapters. The first two chapters have 3 questions each and the last two chapters have 6 questions each. The fourth question can be picked from any of the chapters. How many different question papers could have been prepared?

- A.540
- B.1260

- C.1080
- D.400
- E.4860

Q. 23

How many five digit numbers can be formed using the digits 0, 2, 3,4and 5, when repetition is allowed such that the number formed is divisible by 2 and 5?

- A.100
- B.150
- C.3125
- D.500
- E.125

Q. 24

In how many ways can five rings be worn in 3 fingers?

- A.81
- B.625
- C.15
- D.243
- E.125

Q. 25

How many pentagons can be drawn by joining the vertices of a polygon with 10 sides?

- A.562
- B.252
- C.105
- D.400
- E.282

Q. 26

Find the number of words formed by permuting all the letters of the word INDEPENDENCE such that the E??s do not come together.

- A.24300
- B.1632960
- C.1663200
- D.30240
- E.12530

Q. 27

Ten different letters of an alphabet are given. Words with 6 letters are formed with these alphabets. How many such words can be formed when repetition is not allowed in any word?

- A.52040
- B.21624
- C.182340
- D.151200
- E.600000

Q. 28

If $P(2n+1, n-1) : P(2n-1, n) = 3:5$, find n .

- A.2
- B.4
- C.6
- D.8
- E.10

Q. 29

A polygon has 20 diagonals. How many sides does it have?

- A.12
- B.11
- C.10
- D.9
- E.8

Q. 30

A box contains 5 red and 4 blue balls. In how many ways can 4 balls be chosen such that there are at most 3 balls of each colour?

- A.132
- B.242
- C.60
- D.120
- E.240