**Easy Worksheet on Permutation and Combination**

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| **1.** Evaluate **(i)**  **(ii)**  **(i)**  **(ii)** | **2.** Simplify : | |
| **3.** Two colours are chosen from the colours red (R), yellow (Y), green (G) and blue (B) to be the colours of a logo. **(a)** List the possible combinations of two colours.   1. How many combinations of two colours are available?   **(a)** RY RG RB YG YB GB  **(b)** Combinations of two colours | **4.** A Mark Six lottery ticket consists of marking 6 different numbers ranging from 1 to 49.  **(a)** How many different lottery tickets can you mark?   1. If each ticket costs $5, then how much do you pay for buying all lottery tickets in **(a)**?   **(a)** No.of different lottery tickets    **(b)** Amount I pay | |
| **5.** A relay team of 4 persons is selected from a group of 9 runners. How many different teams can be formed if  **(a)** an outstanding runner must be included in the team?   1. a wounded runner must also be excluded from the team?   **(a)** Different teams can be formed    **(b)** Different teams can be formed | **6.** In how many ways can a group of 5 printers be selected from 6 inkjet and 9 laser printers if the group must contain  **(a)** exactly 3 laser printers?   1. at least 3 laser printers?   **(a)** No. of ways    **(b)** No. of ways | |
| **7. (a)** Find the number of diagonals that can be drawn in an 4-sided polygon.   * 1. Find the number of diagonals that can be drawn in an 5-sided polygon.   **(c)** Find the number of diagonals that can be drawn in an 6-sided polygon.  **(d)** Try to generalize the above cases, find the number of diagonals that can be drawn in an n-sided polygon.  **(a)** No. of diagonals = 2  **(b)** No. of diagonals = 5  **(c)** No. of diagonals = 9  **(d)** No. of diagonals = | |
| **8.** In the Legislative Council, a special committee of 5 members has to be formed from 10 non-official members and 7 official members. In how many ways can the committee be formed if it consists of  **(a)** 5 non-official members? **(b)** 3 non-official and 2 official members?(c) Non-official members in majority?  **(a)** No. of ways can the committee be formed  **(b)** No. of ways can the committee be formed  **(c)** No. of ways can the committee be formed | |
| **9.** A poker hand of 5 cards are selected from a deck of 52 playing cards. How many different poker hands contain  **(a)** all spades? **(b)** 3 Aces and 2 Kings? **(c)** 4 cards with identical number or letter?  **(a)** No. of different poker hand =  **(b)** No. of different poker hand =  **(c)** No. of different poker hand = | |

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