**BALABHADRA SKILL DEVELOPMENT ACADEMY**
**MATHS FORMULA - 6**
**ARITHMETIC**

## DISCOUNT

| Sl | Situation | Formula |
|---|---|---|
| 01 | If there is a discount of r% on the marked price of an item, then selling price of an item | SP=Marked price – Discount $= \text{Marked price} \times \left(1-\frac{r}{100}\right)$ |
| 02 | If marked price of an item is Rs. X and the successive discount rates on the marked price are r1%, r2% , r3% and so on, then selling price of the item | $SP=x\times\left(1-\frac{r_1}{100}\right)\left(1-\frac{r_2}{100}\right)\left(1-\frac{r_3}{100}\right)$ |
| 03 | If a shopkeeper wants a profit of R% after allowing a discount of r%,<br>(a)then Marked Price (MP) of the item is<br>(b)Cost Price (CP) of the item is | (a) $MP=CP\times\left(\frac{100+R}{100-r}\right)$<br>(b) $CP=MP\left(\frac{100-r}{100+R}\right)$ |
| 04 | Single discount equivalent to two successive discounts of $r_1$% and $r_2$% | $\left(r_1+r_2-\frac{r_1\times r_2}{100}\right)\%$ |
| 05 | Single discount equivalent to three successive discounts of $r_1$%, $r_2$% and $r_3$% | $\left[1-\left(1-\frac{r_1}{100}\right)\left(1-\frac{r_2}{100}\right)\left(1-\frac{r_3}{100}\right)\right]\times 100\%$ |
| 06 | A merchant fixes the marked price of an article in such a way that after allowing a discount of r%, he earns a profit of R%, then marked price of the article is more than its cost price by | $\left(\frac{r+R}{100-r}\times 100\right)\%$ |
| 07 | If a shopkeeper allows a discount of $r_1$% on an item and marked price of the item is r% more than the cost price, then profit or loss percent in this transaction | $\left(\frac{r\times(100-r_1)}{100}-r_1\right)\%$ |