

TECHNICAL NOTE

Available Online at www.jgrcs.info

FAST AND EFFICIENT METHODS FOR PROFIT & LOSS RELATED PROBLEMS (FEM-PLRP)

Gaurav Dobriyal*

Dept. Of Computer Science, Dev Bhoomi Institute of Technology, Dehradun (U.K.), INDIA
dobriyal.gaurav74@gmail.com*

Abstract: This is one of the important or frequent asking lessons in all written examination. In this paper I try to give some of the effective tricks to solve the problem more easily and quickly, I will tell you how to short-out problem more quickly as compared to traditional method which take time. In this point of time we don't have time to go for the tradition method which is only the wastage of time and in banking sector we have to solve the problem as soon as possible because we 90mint to solve the 200 question. So in this paper we give the type of question and the tricks to solve the question.

INTRODUCTION

- It is very essential on the part of a teacher to develop a conceptual clarity in children about profit and loss.
- This module will help in dealing children at primary level with example.
- This module is benefited to the teacher as well as student.
- It helps to understand the market value of the product.
- Children learn better from their practice & develop confidence

Profit and loss is the branch of basic mathematics which deals with the study of profit and loss made in a business transaction. The profit and loss account is fundamentally a summary of the trading transactions of a business and shows whether it has made a profit or loss during a particular period of account. Indeed, by deducting the total expenditure from total income the profit or loss of a business can be calculated. Along with the balance sheet, it is one of the key financial statements that make up a company's statutory accounts. Basically, this type of account shows the following information for a business [1]:

- Sales revenue earned by business
- Cost of sales that the business has incurred
- Other operating costs incurred by the business
- Profit/Loss earned by business.

Profit and loss is mainly used in finance and business transactions. Some important **profit and loss formulas** are:
Notations used in **profit and loss**:

- S.P. – Selling price
C.P. – Cost price
M.P. – Marked Price.

Profit and Loss Formulas:

- Profit or Gain = S.P. – C.P. [profit is made only when S.P. is greater then C.P.]
- Loss = C.P – S.P. [Loss id made only when C.P. is greater than S.P.]
- Profit % = (Actual Profit ÷ C.P.) × 100%
- Loss % = (Actual loss ÷ C.P.) × 100%
- C.P. = (S.P. × 100) ÷ (100 + profit%) [If profit is made]
- C.P. = (S.P. × 100) ÷ (100 – profit%) [If loss is made]
- S.P. = (100 + profit%) × C.P ÷ 100 [If profit is made]
- S.P. = (100 – loss%) × C.P ÷ 100 [If loss is made]
- Actual Discount = M.P. – S.P.
- Discount% = (Actual Discount ÷ M.P.) × 100%
- S.P. = M.P. – Actual Discount
- S.P. = M.P. – Discount% of M.P.

The Overall Summary of all these formulae in which we can calculate the gain, loss, S.P & C.P directly by using the below formula.....

$$S.P = \frac{(100 \pm g/l)}{100} C.P....$$

if we use gain then we use + sign and if we use loss then we use – sign.

Objective:

- To provide the student clear concept about profit and loss.
- To enhance the student in purchasing and selling activity.
- To make recognize the student with money value in marketing system.

Table 1: Profit and Loss

| Profit and loss table | | | | |
|-----------------------|----------|----------|--|---|
| name of article | c.p | s.p | if s.p>c.p,Profit=s.p -c.p | ifs.p<c.p, loss= c.p-s.p |
| bicycle | Rs.2000 | Rs. 2500 | Rs. 2500>Rs.2000,profit = 2500-2000=Rs.500 | - |
| Radio | Rs. 3000 | Rs. 2500 | - | Rs. 3000 > Rs.2500, loss =3000-2500 =Rs.500 |

Important facts [1]:

Cost Price:-The price, at which an article is purchased, is called its cost price (C.P).

Selling Price:-The price, at which an article is sold, is called its selling price (S.P).

Profit or Gain:-If S.P is greater than C.P, the seller is said to have a Profit or Gain.

Loss:-If S.P. is less than C.P, the seller is said to have incurred a loss.

The Overall Summary of all these formulae in which we can calculate the gain, loss, S.P & C.P directly by using the below formula.....

$$S.P = \frac{(100 \pm \text{g/l}) C.P}{100}$$

if we use gain then we use + sign and if we use loss then we use - sign.

E.g. - if C.P is 150, in what price it will be selling so as to gain 20%?

Proceed as-gain 20% is given so, S.P= (120/100)*150=180.

E.g. If C.P is 180, in what price he will sell it so as to suffer a loss of 10%?

Proceed as: - i.e. loss is 10% so S.P = ((100-10)/100)*180=162.

Trick Type [2-4]

Type 1: If a man purchase A orange for Rs B & sell C orange for Rs D. How much profit or loss percent does he make?

Go as

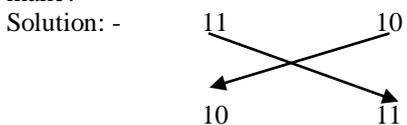


Proceed as - profit and loss depend on the positive and negative sign and method to solve it is multiple A with D and B with C, as B is become C.P and it is multiple by C, as we know that we always divide the gain or loss by C.P ,so we divide it by B*C.

$$\text{Profit/loss\%} = \left(\frac{A*D - B*C}{B*C} * 100 \right)$$

After solving it, if we get negative answer then it will be loss and if we get positive sign then it will gain.

Sample: - If a man purchase 11 orange for Rs 10 and sell them 10 orange for Rs 11.How much profit or loss does he make?



$$= \left(\frac{11 \times 11 - 10 \times 10}{10 \times 10} \right) \times 100$$

$$= \left(\frac{121 - 100}{100} \right) \times 100$$

$$= 21\% \text{ profit (+).}$$

Type-2:-By selling an item for Rs X, a tradesman would gain/ loss Y%. At what price must he sell it to gain/loss Z%?

Proceed as:- to find SP of an item by which a person get a gain of z% is

$$SP = X \times \left(\frac{100 + Z}{100 + Y} \right)$$

If there is a gain then we use + sign and if there is a loss then we use - sign.

Sample: - By selling a table for Rs 570 a trade man would loss 5%. At what price must he sell it to gain 5%?

Solution:-

$$SP = 570 * \left(\frac{100+5}{100 - 5} \right)$$

$$= 570 * \left(\frac{105}{95} \right)$$

$$= \text{Rs } 630.$$

CONCLUSION

There are many tricks to solve the problem as soon as possible in this paper i try to give u some tricks which help you out to solve the problem . This point of time we need some effective methods to solve the problems so i tried to give u some quicker type method which helps u to solve the problem quickly, right now time tradition method take some time to solve the problem by which we cannot complete or finish the paper in time.

REFERENCES

- [1]. R.S. Aggarwal, Quantitative Aptitude. S. Chand Co. Reprint Edition, 2008.
- [2]. M. Tyra. Quicker Maths. S. Chand Co. 4th Review Ed., 2005.
- [3]. A. Aggarwal, Quick Arithmetics. S. Chand Co. 1st Ed. 2004.
- [4]. R.S. Aggarwal and D. Aggarwal. Mathematics for MCA. S. Chand Co. 2nd Ed. 2004.

Short Bio Data for the Author



Er. Gaurav Dobriyal. Master in Computer Application in 2011 From Graphic Era University Dehra Dun Uttarakhand, PGDCA from Hiltron Calc Approved from IIT, Roorkee, INDIA in 2007. Bachelor of Science from D.A.V(PG) college Affiliated From Hemanti Nandan Bahuguna Gharwal University(H.N.B.G.U). My Research areas are **Quatitative Aptitude**, networking etc.