**MTH302 Formulas**

Formula 1

Percent = fraction x 100

Formula 2

Percent =base x rate

Formula 3

Average = sum / number

Where

Sum= sum of all data values

Number = number of all data values

Formula 4

Change = final value- initial value

% change = change x 100/ initial value

 Or % change = (final value- initial value )x 100/ initial value

Formula 5

Stock yield = annual dividend payments / stock’s current share price

Formula 6

Earnings per share= total profits of company/ number of shares

Formula 7

Price earning ratio = market value per share (or) company’s current share price/

Earnings per share MTH302       Formulas

Or Price earning ratio = market value per share (or) company’s current share

price/ total profits of company/ number of shares

Or Price earning ratio = market value per share (or) company’s current share price

x number of shares/ total profits of company

Formula 8

Net current asset value per share = (current assets – total liabilities)/ number of

shares outstanding

Formula 9

Dividends = Dividends% x number of shares/ face value of the share

Formula 10

Return on investment in %= total gain x 100/ total cost

Formula 11

Net cost price = list price – discount in Rs.

Where discount in Rs = discount % x list price

So

Net cost price = list price- (discount % x list price)

Formula 12

Simple interest = principal x time in years x rate of interest per annum / 100

Or I= PRT/100

Formula 13

Compound interest = S-P

Where S= P (1+R/100) n

So Compound interest = P (1+R/100) n

-P

 MTH302       Formulas

S= money accrued after n years or compound amount or accumulated value

P= principal

R = rate of interest per annum

N = number of periods

Formula 14

PV ordinary annuity (OR) A= r (OR) C x DISCOUNT FACTOR

DISCOUNT FACTOR = [1-(1+i)

-n/ i]

PV ordinary annuity (OR) A= r (OR) C x [1-(1+i)

-n/ i]

A= discounted or present worth of an annuity

Formula 15

FV ordinary annuity (OR) A=R (OR) C X ACCUMULATION FACTOR

Accumulation factor= [(1+i) n -1/i]

FV ordinary annuity (OR) S =r (OR) C x [(1+i) n -1/i]

S =accumulated value

C (OR) r = payments per periods (OR) amount of annuity (OR) cash flow per

period

i= rate of interest per annum

n= number of payments

Formula 16

Selling price = cost price + Rs. Markup on cost

Rs. Markup on cost = cost price x % markup on cost

So Selling price = cost price + (cost price x % markup on cost)

So Selling price = cost price (1+% markup on cost)

 MTH302       Formulas

Formula 17

Selling price = cost price + (selling price x % markup on sale)

cost price = Selling price – (Selling price x % markup on sale)

Cost price = Selling price (1- % markup on sale)

Formula 18

Rs. Markup = Selling price – Cost price

(OR) Rs. Markup on cost= cost price x % markup on cost

Rs. Markup on sale = Selling price x % markup on sale

Formula 19

% Markup on cost= (Selling price – Cost price) x 100/ Cost price

(OR) Rs. Markup on cost= Rs. Markup x 100/ Cost price

(AND) % Markup on SALE = (Selling price – Cost price) x 100/ Selling price

(OR) Rs. Markup on sale = Rs. Markup x 100/ Selling price

Formula 20

New selling price= current (OR) old selling price – Rs. Markdown

Where Rs. Markdown = % Markdown x current (OR) old selling price

 New selling price = current (OR) old selling price – (% Markdown x current (OR)

old selling price)

New selling price = current (OR) old selling price (1- % Markdown)

Formula 21

Rs. Markdown = current (OR) old (OR) original selling price - new selling price

% Markdown= Rs. Markdown x 100/ current (OR) old (OR) original selling price

Formula 22

Actual Rs. Paid = total Rs. Assumed to be paid due to discount (1-% discount) MTH302       Formulas

Formula 23

Margin % = Rs markup (OR) Rs. Margin x 100/ sale

And Rs. Margin= Margin % x selling price

While markup % = Rs. Markup x 100/ cost

Margin (OR) markup = (Selling price – Cost price) x 100/ Selling price

Selling price =cost price + Rs. Margin / Rs. Markup

Remember unless it is mentioned that markup is on sale, simple markup means

markup on cost    while margin is always on sale

Formula 24

 Markup on sale= % markup on cost / (1+ % markup on cost)

% markup on cost= % markup on sale/ (1+ % markup on sale)

Formula 25

Break even point (OR) BEP in units = fixed cost/ contribution margin per unit

Formula 26

 BEP in Rs. = fixed cost x net sales / TOTAL contribution margin

BEP in Rs. = fixed cost x selling price per unit / contribution margin per unit

Formula 27

BEP as % capacity = BEP in units x 100/ production capacity

Formula 28

Total Contribution margin = Net sales- variable cost

Contribution margin per unit = selling price per unit - variable cost per unit

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Formula29

Contribution rate = Total Contribution margin x 100/ net sales

Contribution rate = Contribution margin per unit x 100/ selling price per unit

Formula 30

Net income = number of units sold above BEP x Contribution margin per unit

Formula 31

Net loss = number of units sold below BEP x Contribution margin per unit

Net loss= - Net income = - number of units sold above BEP x Contribution margin

per unit