## 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
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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)

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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