Business Formulas Cheatsheet for Practicing the Programming of Equations

Professor F

The most common business formulas that you can use to practice variables, operators, expressions, and operator precedence.

1. **Total Cost (to Consumer)**

$$Total = Price * (1 + Taxrate)$$

2. **Basic Accounting Formula**

$$Equity = Assets - Liabilities$$

3. **Net Income**

$$Net\ Income = Revenue - Expenses$$

4. **Break Even Point**

$$Break\ Even\ Point\ = \frac{Fixed\ Costs}{Sales\ Price\ Per\ Unit - Variable\ Costs\ Per\ Unit}$$

5. **Cash Ratio**

$$Cash\ Ratio = \frac{Cash}{Current\ Liabilities}$$

6. **Current Ratio**

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$$

7. **Profit Margin Percentage**

$$Profit\ Margin\ Percentage = \frac{Net\ Income}{Sales} \times 100$$

8. **Markup Percentage**

$$Markup\ Percentage = \frac{Price\ of\ Good - Cost\ of\ Good\ Sold}{Cost\ of\ Good\ Sold} \times 100$$

9. **Debt to Equity Ratio**

$$Debt\ to\ Equity\ Ratio = \frac{Total\ Liabilties}{Total\ Equity}$$

10. **Cost of Goods Sold (COGS)**

$$Cost\ of\ Goods\ Sold = Beginning\ Inventory + Cost\ of\ Purchasing\ New\ Inventory\ - Ending\ Inventory$$

11. **Retained Earnings**

$$Retained\ Earnings\ =\ Beginning\ Retained\ Earnings\ +\ Net\ Income\ or\ Net\ Loss\ -\ Cash\ Dividends$$

12. **Return on Investment**

$$Return\ on\ Investment\ = \frac{Investment\ Gain - Investment}{Investment}$$

13. **Inventory Shrinkage Percentage**

$$Inventory\ Shrinkage\ Percentage = \frac{Recorded\ Inventory - Actual\ Inventory}{Recorded\ Inventory} \times 100$$

14. Future Value

$$Future\ Value = Cash\ \times (1 + Rate\ of\ Return)^{Time}$$

15. Present Value

$$Present\ Value = \frac{Future\ Value}{(1 + Rate\ of\ Return)^{Time}}$$

16. Simple Interest

$$Simple\ Interest = Principal\ \times\ Rate\ \times\ Time$$

17. Compound Interest

$$Amount = Principal\left(1 + \frac{Rate}{Compoundings}\right)^{Compoundings \times Time}$$

18. Effective Rate

$$Effective\ Rate = \left(1 + \frac{Rate}{Compoundings}\right)^{Compoundings} - 1$$

19. Amortized Loan Payment

$$Amortized\ Loan\ Payment = Amount\ Borrowed \times \frac{Periodic\ Interest\ Rate \times (1 + Periodic\ Interest\ Rate)^{Number\ of\ Payments}}{(1 + Periodic\ Interest\ Rate)^{Number\ of\ Payments} - 1}$$

OR

$$Amortized\ Loan\ Payment = \frac{Amount\ Borrowed \times Periodic\ Interest\ Rate}{1 - (1 + Periodic\ Interest\ Rate)^{-Number\ of\ Payments}}$$

OR

$$Amortized\ Loan\ Payment = Amount\ Borrowed \times (Periodic\ Interest\ Rate + \frac{Periodic\ Interest\ Rate}{(1 + Periodic\ Interest\ Rate)^{Number\ of\ Payments} - 1})$$

20. Remaining Balance

$$Remaining\ Balance = Regular\ Payment\left(\frac{1 - (1 + Periodic\ Interest\ Rate)^{-(Number\ of\ Payments - Number\ of\ Payments\ Already\ Made)}}{Periodic\ Interest\ Rate}\right)$$

Pro-Tip:

- Keep in mind operator precedence when doing these equations, and add parentheses as needed, e.g., #4