



calculatoratoz.com



unitsconverters.com

Basic Formulas in Construction Planning and Management

Calculators!

Examples!

Conversions!

Bookmark calculatoratoz.com, unitsconverters.com

Widest Coverage of Calculators and Growing - **30,000+ Calculators!**
Calculate With a Different Unit for Each Variable - **In built Unit Conversion!**
Widest Collection of Measurements and Units - **250+ Measurements!**

Feel free to SHARE this document with your friends!

[Please leave your feedback here...](#)



List of 15 Basic Formulas in Construction Planning and Management

Basic Formulas in Construction Planning and Management

Critical Path Method

1) Earliest Finish Time

$$fx \quad EFT = LFT - TF_0$$

[Open Calculator](#)

$$ex \quad 26d = 50d - 24d$$

2) Free Float given Independent Float

$$fx \quad FF_0 = IF_0 + S$$

[Open Calculator](#)

$$ex \quad 18d = 12d + 6.0d$$

3) Free Float used in CPM

$$fx \quad FF_0 = TF_0 - S$$

[Open Calculator](#)

$$ex \quad 18d = 24d - 6.0d$$



4) Independent Float used in CPM

$$fx \quad IF_0 = FF_0 - S$$

[Open Calculator !\[\]\(cbe80b694ebd74fcfe136a095b608235_img.jpg\)](#)

$$ex \quad 12d = 18d - 6.0d$$

5) Interfering Float

$$fx \quad IF = TF_0 - FF_0$$

[Open Calculator !\[\]\(3e2231b1ad3ca8da8658228c00dd08e0_img.jpg\)](#)

$$ex \quad 6d = 24d - 18d$$

6) Latest Finish Time

$$fx \quad LFT = TF_0 + EFT$$

[Open Calculator !\[\]\(0d5ec72f61334709c3fc9450209b754f_img.jpg\)](#)

$$ex \quad 50d = 24d + 26d$$

7) Slack of Event given Independent Float

$$fx \quad S = FF_0 - IF_0$$

[Open Calculator !\[\]\(b64b40baaee5acddc1eab8538ba84754_img.jpg\)](#)

$$ex \quad 6d = 18d - 12d$$

8) Slack of Event in CPM

$$fx \quad S = TF_0 - FF_0$$

[Open Calculator !\[\]\(aff7c69c44a5e015f18c35867ef3f5c3_img.jpg\)](#)

$$ex \quad 6d = 24d - 18d$$



9) Total Float given Free Float

$$\text{fx } \text{TF}_0 = \text{FF}_0 + S$$

[Open Calculator !\[\]\(e78f798d4ea5c530c9db49e7d26e6b95_img.jpg\)](#)

$$\text{ex } 24\text{d} = 18\text{d} + 6.0\text{d}$$

10) Total Float in CPM

$$\text{fx } \text{TF}_0 = \text{LFT} - \text{EFT}$$

[Open Calculator !\[\]\(05be7c7a8995decd503647c99211f7c2_img.jpg\)](#)

$$\text{ex } 24\text{d} = 50\text{d} - 26\text{d}$$

Time Cost Relation

11) Cost Slope

$$\text{fx } \text{CS} = \frac{\text{CC} - \text{NC}}{\text{NT} - \text{CT}}$$

[Open Calculator !\[\]\(626ce8ac21792b9405bfddfea8e0c96a_img.jpg\)](#)

$$\text{ex } 100 = \frac{400 - 300}{7\text{d} - 6\text{d}}$$

12) Crash Cost given Cost Slope

$$\text{fx } \text{CC} = (\text{CS} \cdot (\text{NT} - \text{CT})) + \text{NC}$$

[Open Calculator !\[\]\(c1168d6a8b365d11e842ece304635fa7_img.jpg\)](#)

$$\text{ex } 400 = (100 \cdot (7\text{d} - 6\text{d})) + 300$$



13) Crash Time given Slope

[Open Calculator !\[\]\(bd1a142de767a21e5362c595f844a4ff_img.jpg\)](#)

$$\text{fx } CT = - \left(\left(\frac{CC - NC}{CS} \right) - NT \right)$$

$$\text{ex } 6d = - \left(\left(\frac{400 - 300}{100} \right) - 7d \right)$$

14) Normal Cost given Slope

[Open Calculator !\[\]\(830769b31eeeaca920791081939ff8ba_img.jpg\)](#)

$$\text{fx } NC = CC - (CS \cdot (NT - CT))$$

$$\text{ex } 300 = 400 - (100 \cdot (7d - 6d))$$

15) Normal Time given Slope

[Open Calculator !\[\]\(47734e4656765d20df4fdbd5b7aff048_img.jpg\)](#)

$$\text{fx } NT = \left(\frac{CC - NC}{CS} \right) + CT$$

$$\text{ex } 7d = \left(\frac{400 - 300}{100} \right) + 6d$$



Variables Used

- **CC** Crash Cost
- **CS** Cost Slope
- **CT** Crash Time (Day)
- **EFT** Earliest Finish Time (Day)
- **FF₀** Free Float (Day)
- **IF** Interfering Float (Day)
- **IF₀** Independent Float (Day)
- **LFT** Latest Finish Time (Day)
- **NC** Normal Cost
- **NT** Normal Time (Day)
- **S** Slack of an Event (Day)
- **TF₀** Total Float (Day)






Constants, Functions, Measurements used

- **Measurement:** Time in Day (d)

Time Unit Conversion 



Check other formula lists

- **Basic Formulas in Construction Planning and Management** 
- **Project Evaluation and Review Technique Formulas** 
- **Construction Management Formulas** 
- **Valuation Engineering Formulas** 

Feel free to SHARE this document with your friends!

PDF Available in

[English](#) [Spanish](#) [French](#) [German](#) [Russian](#) [Italian](#) [Portuguese](#) [Polish](#) [Dutch](#)

9/21/2023 | 7:33:55 AM UTC

[Please leave your feedback here...](#)

