



Refrigeration and Air Conditioning Mechanic Level 3

Formulas

1. $COP = \frac{Cap.W}{P_w} = \frac{Cap.Btuh}{P_{Btuh}}$
2. $Q_S = 1.08 \times cfm \times \Delta^\circ F$
3. $Q_T = 4.5 \times cfm \times \Delta H$
4. $Btu's = WT \times SH \times TD$
5. $3 \sigma V_{Im} = \frac{Max.dev. - E_{ave}}{E_{ave}} \times 100\%$
6. $Q = U \times A \times TD$
7. $U = K/X = 1/R$
8. $Q = \frac{A \times TD}{R}$
9. $Q = \frac{k \times A \times TD \times 24 \text{ hr}}{Th}$
10. $Q = gpm \times 600 \times TD$
11. $Travel^2 = Set^2 \times Run^2$
12. $C = fDL$
13. $\% OA = \frac{RAT - MAT}{RAT - OAT} \times 100\%$
14. $MAT = (\% RA \times RAT) + (\% OA \times OAT)$



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15. $\text{Reset Ratio} = \frac{\text{Control Temperature Change}}{\text{Outside Air Temperature Change}}$

16. $\text{Pressure Relief Capacity} = \text{Factor} \times \text{Diameter (ft)} \times \text{Length (ft)}$

17.

