ECHO Quick Formulas (For Study Use Only)

$$\text{Shift} = \frac{\text{Present Weight x Arm to Shift}}{\text{Difference between areas}}$$

$$\text{Add} = \frac{\text{Present Weight x Arm to Shift}}{\text{Required C of G - Where the weight is going}}$$

Fwd Edge = Present Weight - 2360 x .27 + 2400

% MAC = Present C of G - 2190 / 1900 x 100

$$\text{Time to PNR} = \frac{\text{Safe Endurance x Groundspeed Home}}{\text{2 x TAS}}$$

$$\text{Distance to CP} = \frac{\text{Total Distance x Groundspeed Home}}{\text{2 x TAS}}$$

$$\text{Gradient \%} = \frac{\text{Rate of Rise}}{\text{Groundspeed}}$$

Specific Air Range = Fuel Flow / TAS (Gal/NM)

Specific Ground Range = Fuel Flow / Groundspeed (NM/Gal)

Air Nautical Miles per Gallon = TAS / Fuel Flow

Ground Nautical Miles per Gallon = G/S / Fuel Flow

Floor Loading = largest length x largest length x 450

Example: .4 x .3 x 450