Misc. Tech :

1 psi boost = .5 point CR (effective CR)
1 point CR = 2 psi boost (CYLINDER PRESSURE)
1 point CR = 2% HP
1 psi boost requires 1-1.5 octane (minimum)
1 psi boost = 6.8% HP max (1 ÷ 14.7 = 6.8%)
1 point CR = 3 - 5 octane
1 AF ratio = 2 octane
1° advance = 1/2 - 3/4 octane point
10° engine coolant (160° -180° range) = 1 octane
20° ambient = 1 octane
1 can NOS Octane Boost = 1.5 - 3.6 octane (see table)
1000' altitude = -1 octane point
1000' altitude = .5 psi (2" Hg)
6°F temp change = 1% air density
30% humidity = 1 octane
10° air charge temperature = 1% HP
20° charge temp reduction through intercooling = .5 psi additional boost with same octane
3/4 PSI DROP = 5% pressure (5% x 14.7 = .75 psi)
10% HP increase = 7% AF ratio (based on 70% VE) or 10% AF ratio with 100% VE
10 psi fuel pressure = 8% AF ratio: 5 psi = 4% AF ratio
HP = CFM (int @ 28") x .257 x no. cylinders
10HP = .1 sec / 1 mph 1/4 mile
100 lbs = .1 sec / 1 mph 1/4 mile