

DIVING FORMULAS

BAROMETRIC PRESSURE CONVERSIONS

Units	PSIG	PSIA	ATM	ATA	FSW	FSWA	FFW	FFWA
PSIG●		Add 14.7	Divide by 14.7	Add 14.7, divide 14.7	Divide by .445	Divide by .445 + 33	Divide by .432	Divide by .432 + 34
PSIA●	Minus 14.7		Minus 14.7, divide 14.7	Divide by 14.7	Minus 14.7, divide .445	Divide by .445	Minus 14.7, Divide .432	Divide by .432
ATM●	Times 14.7	Times 14.7, add 14.7		Add 1	Times 33	Times 33 + 33	Times 34	Times 34 + 34
ATA●	Minus 1, times 14.7	Times 14.7	Minus 1		Times 33, minus 33	Times 33	Times 34, minus 34	Times 34,
FSW●	Times .445	Times .445, add 14.7	Divide by 33	Add 33, divide 33		Add 33	Times 1.03	Times 1.03 + 34
FSWA●	Minus 33, times .445	Times .445	Minus 33, Divide 33	Divide by 33	Minus 33		Minus 33, times 1.03	Times 1.03
FFW●	Times .432	Times .432, add 14.7	Divide by 34	Add 34, divide 34	Times .97	+ 34 Times .97		Add 34
FFWA●	Minus 34, times .432	Times .432	Minus 34, Divide 34	Divide by 34	Minus 34, times .97	Times .97	Minus 34	

“T” formula:

$$\frac{\text{Partial Pressure}}{\text{Total Pressure (Absolute)}} = \frac{\% \text{ Gas (Decimal)}}{100}$$

Temperature Conversions:

°C = .556 x (°F - 32)
 °F = (1.8 x °C) + 32
 °Rankine = °F + 460
 °Kelvin = °C + 273

EAD:

$$\left[\left[\frac{1 - FO_2}{.79} \right] \times (D + 33) \right] - 33$$

<p>BOYLE'S LAW: $P_1V_1 = P_2V_2$</p> <p> $P_1 = \frac{P_2 \times V_2}{V_1}$ $V_1 = \frac{P_2 \times V_2}{P_1}$ $P_2 = \frac{P_1 \times V_1}{V_2}$ $V_2 = \frac{P_1 \times V_1}{P_2}$ </p>
<p>CHARLES' LAW: $\frac{V_1}{T_1} = \frac{V_2}{T_2}$</p> <p> $V_1 = \frac{T_1 \times V_2}{T_2}$ $V_2 = \frac{V_1 \times T_2}{T_1}$ $T_1 = \frac{V_1 \times T_2}{V_2}$ $T_2 = \frac{T_1 \times V_2}{V_1}$ </p>
<p>GAY-LUSSAC'S LAW: $\frac{P_1}{T_1} = \frac{P_2}{T_2}$</p> <p> $P_1 = \frac{T_1 \times P_2}{T_2}$ $P_2 = \frac{P_1 \times T_2}{T_1}$ $T_1 = \frac{P_1 \times T_2}{P_2}$ $T_2 = \frac{T_1 \times P_2}{P_1}$ </p>