

$$r = \frac{c_p}{c_v} = \frac{1}{\gamma} \quad (3)$$

$\frac{1}{\gamma} = \text{نسبة سائل حار}$

$$v = \frac{(r)c_v - (o)c_v}{r - o} \quad (4)$$

$$\frac{1}{\Sigma} = \frac{(o)c_v - (g)c_v}{o - g}$$

$$\begin{aligned} r_1 &= (r)c_v - (o)c_v \\ o_1 &= (o)c_v - (g)c_v \\ \frac{1}{\Sigma} &= \frac{c_v(o) - c_v(g)}{o - g} \end{aligned}$$

$$[q - r] \text{ مل } \quad \frac{1}{\Sigma} = \frac{v_v}{v} = \frac{c_v(o) - c_v(g)}{o - g}$$

$$\begin{aligned} (1+r) \cup \{1+1\} &\Rightarrow r(1) \quad (5) \\ \{1+r\} &\Rightarrow r \quad (6) \\ \{1+1+r\} &\Rightarrow r \quad (7) \\ \text{مث} &= \text{صفر} \quad \text{مث}(2) = \text{صفر} \quad \text{مث}(3) = \text{صفر} \quad (8) \\ 1 = \frac{1-1}{o-e} &= \frac{1-r_c v}{1-r_v v} = \frac{1-r_c v}{o-e} = \text{مث}(o) = \text{مث}(g) \end{aligned}$$

$$(1)(1+r) - (1+r)(1+r) = (r)(\text{فول}) \quad (9)$$

$$\frac{r(1+r)}{P-r - r + r^2 + r^3} = (r)r \times (r)r \quad \text{مث}(r)$$

$$r = (1)r \leftarrow \frac{1}{\sqrt{1+r}} = (r) \quad \text{مث}$$

$$\frac{r-1-r+r}{\Sigma} = (1)r \times (1)r \quad \text{مث}$$

$$\frac{P-o}{\Sigma} = \Sigma \times (1) \quad \text{مث}$$

$$\frac{P-o}{\Sigma} \cancel{\times} \frac{1}{\Sigma} \iff \frac{P-o}{\Sigma} = \Sigma \times r$$

$$rV - \cancel{r} \iff r - o = \Sigma \times \Sigma$$

$$1 \times (1)r + r \times (1)r \times \cancel{r} = \cancel{r} \times r \quad (10)$$

$$r = o \Leftarrow \Sigma = \cancel{r} \Leftarrow (1)r \Leftarrow \cancel{r} \Leftarrow 1 = \cancel{r} \quad \text{مث}$$

$$1 \times (1)r + r \times (1)r \times 1 = \cancel{r} \times r \quad \therefore$$

$$r = \frac{1}{\Sigma} = \cancel{r} \Leftarrow \Sigma + r = \cancel{r}\Sigma$$

$$\therefore = \frac{1+r\sqrt{o-g}}{o-g-1} \quad \text{مث}$$

$$\frac{1+r\sqrt{o-g}+1}{1+r\sqrt{o-g}+1} \times \frac{1+r\sqrt{o-g}-1}{1+r\sqrt{o-g}-1} \quad \text{مث}$$

$$\frac{(1+r)\cancel{r}-\cancel{r}}{(\cancel{1+r\sqrt{o-g}+1})(o-g)} \quad \text{مث}$$

$$\frac{\cancel{r}r-\cancel{r}r-\cancel{r}}{(\cancel{1+r\sqrt{o-g}+1})(o-g)} \quad \text{مث}$$

$$\frac{1}{FV} = \frac{1}{FV} - \frac{r}{FV}$$

$$\frac{\cancel{r}r-\cancel{r}r-\cancel{r}}{(\cancel{1+r\sqrt{o-g}+1})(o-g)} \quad \text{مث}$$

$$\frac{1}{FV} = \frac{1}{FV} + \frac{r}{FV}$$

$$\frac{\cancel{r}r-\cancel{r}r-\cancel{r}}{(\cancel{1+r\sqrt{o-g}+1})(o-g)} \quad \text{مث}$$

$$r = (\frac{1}{r})r \quad (1)$$

$$r = o - \cancel{r} - \cancel{r} = (r)r \cancel{r} + \cancel{r} \quad (1)$$

$$\frac{1-\cancel{r}}{r(o-g-1)} \cancel{r} = (r)r \cancel{r} + \cancel{r} \quad (1)$$

$$\frac{(1+\cancel{r})(1-\cancel{r})}{|o-g-1|} \cancel{r} = (r)r \cancel{r} + \cancel{r} \quad (1)$$

$$\frac{r \times 1 - (1+\cancel{r})(1-\cancel{r})}{o-g-1} \cancel{r} = (r)r \cancel{r} + \cancel{r} \quad (1)$$

$$r = \frac{(1+\cancel{r})(1-\cancel{r})}{o-g-1} \cancel{r} = (r)r \cancel{r} + \cancel{r} \quad (1)$$









