

LITERAL EQUATIONS

$$a^2 + b^2 = c^2$$

$$S = v \cdot t - 16t^2$$

$$A = P(1+r)^t$$

Ex 1

$$\frac{D}{S} = \frac{\cancel{S} \cdot t}{\cancel{S}}$$

SOLVE IT FOR t

$$t = \frac{D}{S}$$

Ex 2

$$A = P + P \cdot r \cdot t, \text{ FOR } P$$

$$\frac{A}{(1+rt)} = \frac{P(1+rt)}{(1+rt)}$$

$$P = \frac{A}{1+rt}$$

Ex 3

$$\frac{S}{S-C} = \frac{R}{1}, \text{ FOR } C$$

$$S \cdot 1 = R \cdot (S-C)$$

$$S = R \cdot S - R \cdot C$$

$$\begin{array}{r} -RS \\ \hline S - RS = -R \cdot C \\ -R \end{array}$$

$$\frac{S - RS}{-R} = \frac{-R \cdot C}{-R}$$

$$\Rightarrow C = \frac{S - RS}{-R} = \frac{RS - S}{R}$$

Ex 4 $\frac{1}{R_1} + \frac{1}{R_2} = \frac{1}{R}$, FOR R

LCM: $R_1 \cdot R_2 \cdot R$

$$R_1 R_2 R \left(\frac{1}{R_1} + \frac{1}{R_2} \right) = R_1 R_2 \cdot R \cdot \frac{1}{R}$$

$$\cancel{R_1} R_2 R \frac{1}{\cancel{R_1}} + R_1 \cancel{R_2} R \cdot \frac{1}{\cancel{R_2}} = R_1 R_2$$

$$R_2 \underline{R} + R_1 \underline{R} = R_1 R_2$$

$$\frac{R(R_1 + R_2)}{\cancel{(R_1 + R_2)}} = \frac{R_1 R_2}{(R_1 + R_2)}$$

$$\boxed{R = \frac{R_1 R_2}{R_1 + R_2}}$$

Ex 5

$$\frac{t}{1} = \frac{r}{n+1} \quad , \text{ FOR } n$$

$$t(n+1) = 1 \cdot n$$

$$\begin{array}{r} t \cdot n + t = n \\ -t \cdot n \quad \quad -t \cdot n \\ \hline \end{array}$$

$$t = n - t \cdot n$$

$$t = n(1 - t)$$

$$\frac{t}{(1-t)} = \frac{n(1-t)}{(1-t)}$$

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

Ex 6

$$C \longleftrightarrow F$$

$$C = \frac{5}{9} (F - 32) \quad , \text{ FOR } F$$

$$9 \cdot / \qquad \qquad \qquad / \cdot 9$$

(r1)

$$9C = 5(F - 32)$$

$$9C = 5F - 160$$

$$+160 \qquad \qquad +160$$

$$\frac{9C + 160}{5} = \frac{5F}{5}$$

$$F = \frac{9C + 160}{5}$$

(r2)

$$\frac{9}{5} \cdot / C = \frac{5}{9} (F - 32) \quad / \cdot \frac{9}{5}$$

$$\frac{9}{5} C = F - 32$$

$$+32 \qquad \qquad +32$$

$$\boxed{\frac{9}{5} C + 32 = F}$$