H·W MATHS:-

3) Let the sum = x

Then $x\left[\left(1+\frac{10}{100}\right)^2-1\right]=525$

$= x\left[\left(\frac{11}{10}\right)^2\right]=525$

$= \left[\frac{121-100}{100}\right]$

$\therefore x = \frac{525\times100}{21} = ₹2500$

For S.I, P = Rs 2500 = R = 5% p.a and T = years

Then S.I = $Rs\left(\frac{2500\times5\times4}{100}\right) = ₹500$

2) P = 4000

T = 2

R = 10

C.I = $P\times(1+r)^n - P$

I = $P\{(1+r)^n - 1\}$

I = $4000(1+.10)^2 - 1$

I = 840

A.T.Q,

S.I = $\frac{840}{2} = 420 = PRT/100$

I = 420 = $P\times.08\times3$

I = 1750

3) Given, 60% increase in 6 years at S.I

Find: C.I of 12000 after 3 yrs.

$S.I = \frac{P\times r\times t}{100}$

A = SI + P

where, A = amount

Let, Principal be Rs P

A = P + 60% of P

$A = P + \left(\frac{60}{100}\right)P$

$A = \frac{8P}{5}$

4) $S.I = \frac{P\times r\times t}{100} = \frac{15000\times r\times2}{100} = 300r$

$C.I = 15000\left[\left(1+\frac{r}{100}\right)^2-1\right] =$

$15000\left[1+\frac{r^2}{10,000}+\frac{2r}{100}-1\right] = 1.5r^2+300r$

C.I − S.I = 96

$1.5r^2 + 300r - 300r = 96$

$1.5r^2 = \frac{96}{1.5} = 64$

$r = 8 \Rightarrow$ Rate = 8%