Engineering Economy

SDLC cost

1. problem definition
2. system analysis
3. " design
4. " implementation
5. test & mentainance

S16

- Cloud Com
- IoT
- Big Data
- mobile adtpt
- EXPertsystem
- machine learning
- Swarm AI
- G A
  Genetic

الفائدة
Interest
simple
Compound

TVOM => Time Value of money
القيمة الزمنية للنقود

Cash flow Diagram

$I = \frac{200}{1000} * 100\% = 20\%$

after 2 years = 1400 $

Simple Interest

1000 $ now

12000 $ back after one year

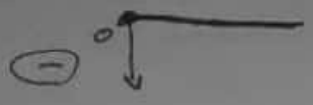
Interest
I = 12000 - 1000
= 200 $

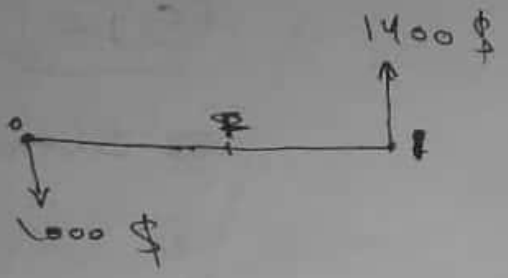
⊕ Cash flow Diagram

(I) ⇒ Interest

(i) ⇒ Interest rate

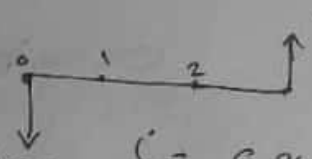
⊖ ↓ ⊕ ↑





I = 400

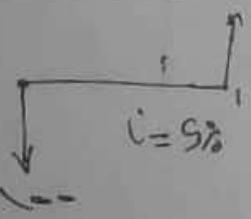
i = 40 %



⇒ (115) ⇒ future value (F)

Present value (P)

(n) ⇒ عدد السنين



$F = i*n*P + P$

F = 105

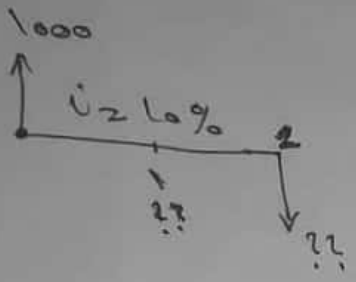
$F = P + i*P = P(1+i)$

for many years (n) = $F = P + i*n*P$

$F = P(1 + i*n)$ ⇒ #

mpound Interest rate :-

الفائدة المركبة



after one year $f = 1100$

(P) ←

after 2 year $f = 1210$

$f_1 = P + P * i$

$f_2 = f_1 + f_1 * i$

$= P + Pi + Pi + Pi^2$

$2Pi$

$= P(1+i)^2$

$f_3 = P(1+i)^3$

$$\boxed{f_n = P(1+i)^n} \Rightarrow \#$$