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3.1 :-

interest, i = 12 %
Lump sum amount, F = ?
No of years, N = 7

$F = P(1+i)^N$
$F = 1000(1+0.12)^{(7)}$
$F = \$7500$

3.2 :-

$P = \$10,500$
$i = 15\%$
$N = 6$

$F = P(1+i)^N$
$= 10500(1+0.15)^6$
$= 24287$

$I = P \times i \times N$
$= \$10500 \quad (0.15) \quad (6)$
$I = \$9450$

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DATE:

3.4:-

P = 2000
i = 10 %
N = 6 years

At end of 3 years

$F = 1000 (0.10)^{3}(3)$

F = $3000

At the end of 6 years.

$F = 2000 (1+0.10)^{6}$

F = $3543.600

3.5:-

$F_1 = 2000 (1+0.1)^1 = 2200$

$F_2 = 2200 (1+0.1)^1 = 2420$

$F_3 = 2420 (1+0.1)^1 = 2662$

$F_4 = 2662 (1+0.1)^1 = 2928$

$F_5 = 2928 (1+0.1)^1 = 3220$

$F_6 = 3220 (1+0.1)^1 = 3542$

$F_{Total} = 16972$

Here compound interest is increasing with increasing of principal amount

3.9 :-

P = $10,000

interest, i = 15 %

periods, N = 15

$F = 10000 (1 + 0.15)^{15}$

F = $20289.2

3.10 :-

P = 1500

N = 8

i = 12 %

F = ?

$F = 1500 (1 + 0.12)^{8}$

F = 3713