

# FINANCIAL 3

## Inflation, Depreciation, Annuities, Reducible Interest, Amortization.

- 1) Classpad Financial programs      2) Sequences      3) Spreadsheets.

Try the following questions using ALL THREE methods above.

1 Alex bought a new car for \$28 000. If the annual depreciation rate is 12½% and we assume it is constant at this rate, find the value of his car after i) 1 year ii) 5 years. Find out when the car is worth just under \$5000 (~ \$4934) if he bought the car in 2002

2 David bought a house for \$520 000. If we assume a constant annual inflation rate of 4.3% what will be the value of the house in 5 years? If he bought the house in 2005 find out when it will be worth just over a million dollars. (~\$1 019 888)

3 What constant monthly amount needs to be repaid to see a loan of \$10 000 paid off in 2 years with an interest rate of 6% p.a. compounded monthly?

4 Tony borrowed \$2500 dollars to pay for a P.A. System. His account was shown on the classpad as below. Note both images are the same but they are highlighting different items. Tony pays off \$350 every month.

	A	B	C	D	
1	1	2500	16.67	350	2
2	2	2166.67	14.44	350	1
3	3	1831.11	12.21	350	1
4	4	1493.32	9.955	350	1
5	5	1153.27	7.688	350	8
6	6	810.962	5.406	350	4
7	7	466.369	3.109	350	1
8	8	119.478	0.797	350	-
9					
10					
11					
12					
13					
14					
15					

	B	C	D	E
1	2500	16.73	...	2166.67
2	2167.	14.43	...	1831.11
3	1831.	12.23	...	1493.32
4	1493.	9.963	...	1153.27
5	1153.	7.693	...	810.962
6	811.0	5.413	...	466.369
7	466.4	3.113	...	119.478
8	119.5	0.803	...	-229.73
9				
10				
11				
12				
13				
14				
15				

- i) Calculate the interest rate **per annum**.
- ii) What amount does Tony owe at the end of the 5<sup>th</sup> month?
- iii) Calculate the LAST payment.
- iv) What was the total interest Tony paid over the time period.
- v) If Tony paid \$400 a month, how much would he have saved instead of paying \$350 per month?

If you have problems with the calculator see

<http://www.classpad.com.au/>

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Intermediate 541-550

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