

SIMPLE AND COMPOUND INTEREST

[Appreciation and Depreciation]

Practice Questions

Answer **ALL** questions.

1. Complete the following table for the simple interest investments shown.

	P \$	R %	T	I \$	A \$
(a)	400	5	2 years		
(b)	3000	2	7 months		
(c)	800		20 years	320	
(d)	2000		4 years		2140
(e)	700	2	3 years		
(f)		4.5	15 years	1012.50	
(g)			4 years	728	3978
(h)	1700	12.8	years		2354

2. Simon leaves \$3000 in the bank for two years.

It earns compound interest of 2% per year.

Calculate

(i) the total interest =

\$ _____

(ii) the total amount =

\$ _____

that Simon has in the bank at the end of the two years.

3. A car was bought for \$18000.

Its value depreciated by 15% each year for the first three years.

What was its

(i) value at the end of the first year = \$ _____

(ii) value at the end of the second year = \$ _____

(iii) final value = \$ _____ ?

4. Stacey bought a piano for \$2200.

In each year, the value of the piano increases by 11% of its value at the start of that year.

(a) Find the value of the piano after one year.

Value = \$ _____

(b) Calculate after how many complete years the value of the piano will be at least \$3200.

Time = _____ years

5. Nathan invests \$600 for 2 years at 10% per year compound interest. How much interest does he earn?

Total interest = \$ _____

6. A loan of \$12000 was borrowed from a bank at 14% per annum.

(a) Calculate:

- (i) the interest on the loan at the end of the first year.

Interest = \$ _____

- (ii) the amount owing at the end of the first year.

Amount owing = \$ _____

(b) A repayment of \$7800 was made at the start of the second year. Calculate:

- (i) the amount still outstanding at the start of the second year

Amount outstanding = \$ _____

- (ii) the interest on the outstanding amount at the end of the second year.

Interest = \$ _____

7. Evie is saving up to buy a guitar that costs \$109.

She opens an account at Tbank which pays 3% per annum simple interest.

She puts \$800 into the account. Evie does not make any deposits or withdrawals.

Identify the following.

Principal = \$ _____

Interest = \$ _____

Rate = _____ %

After how many whole years will Evie have earned enough interest to buy the guitar?

Time = _____ years