Exponential Growth & Decay
Difficulty: Easy
Question Paper 1

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Number
Sub-Topic	Exponential Growth & Decay
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 1

Time allowed: **46 minutes**

Score: **/36**

Percentage: **/100**

Grade Boundaries:

CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

CIE IGCSE Maths (0980)

9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

Question 1

The value of a motorbike is $12 400.
Each year, the value of the motorbike decreases exponentially by 15%.

Calculate the value of the motorbike after 3 years. [2]

Question 2

The population of Olton is decreasing at a rate of 3% per year.
In 2013, the population was 50000.

Calculate the population after 4 years.
Give your answer correct to the nearest hundred. [3]

Question 3

Alex invests $200 for 2 years at a rate of 2% per year simple interest.
Chris invests $200 for 2 years at a rate of 2% per year compound interest.

Calculate how much more interest Chris has than Alex. [4]

Question 4

Maryah borrows $12 000 to start a business.
The loan is for 3 years at a rate of 5% per year compound interest.
The loan has to be paid back at the end of the 3 years.

Calculate the total amount to be paid back. [3]

Question 5

Bruce invested $420 at a rate of 4% per year compound interest.

Calculate the **total** amount Bruce has after 2 years.
Give your answer correct to 2 decimal places. [3]

Question 6

Carol invests $6250 at a rate of 2% per year compound interest.

Calculate the **total** amount Carol has after 3 years. [3]

Question 7

Acri invested $500 for 3 years at a rate of 2.8% per year compound interest.

Calculate the final amount he has after 3 years. [3]

Question 8

Pedro invested $800 at a rate of 5% per year compound interest.
Calculate the total amount he has after 2 years. [2]

Question 9

Eva invests $120 at a rate of 3% per year compound interest.

Calculate the total amount Eva has after 2 years.
Give your answer correct to 2 decimal places. [3]

Question 10

Johan invested $600 for 3 years at 4% per year **compound** interest.

Calculate the final amount he had after three years. [3]

Question 11

Nikhil invests \$200 for 2 years at 4% per year **compound** interest.
Calculate the **exact** amount Nikhil has after 2 years. [2]

Question 12

NORTH EASTERN BANK	SOUTH WESTERN BANK
SAVINGS ACCOUNT	SAVINGS ACCOUNT
5%	4.9%
Per Year	Per Year
Simple Interest	Compound Interest

Kalid and his brother have $2000 each to invest for 3 years.

(a) North Eastern Bank advertises savings with simple interest at 5% per year.
Kalid invests his money in this bank.
How much money will he have at the end of 3 years? [2]

(b) South Western Bank advertises savings with compound interest at 4.9% per year.
Kalid's brother invests his money in this bank.
At the end of 3 years, how much more money will he have than Kalid? [3]