COMPOUND INTEREST AND DEPRICIATION

Pearson Edexcel - Tuesday 11 June 2019 - Paper 3 (Calculator) Foundation Tier

1.

25 Katy invests £200 000 in a savings account for 4 years.
The account pays compound interest at a rate of 1.5% per annum.

Calculate the total amount of interest Katy will get at the end of 4 years.

£...

(Total for Question 25 is 3 marks)

2.

23 Northern Bank has two types of account.
Both accounts pay compound interest.

| **Cash savings account** |
| Interest |
| 2.5% per annum |

| **Shares account** |
| Interest |
| 3.5% per annum |

Ali invests £2000 in the cash savings account.
Ben invests £1600 in the shares account.

(a) Work out who will get the most interest by the end of 3 years.
You must show all your working.

(4)

In the 3rd year the rate of interest for the shares account is changed to 4% per annum.

(b) Does this affect who will get the most interest by the end of 3 years?
Give a reason for your answer.

(1)

(Total for Question 23 is 5 marks)

3.

13 Abi invests £500 for 4 years in a bank account.
The account pays simple interest at a rate of 2.3% per year.

Work out the total amount of interest Abi has got at the end of 4 years.

£ ....

(Total for Question 13 is 3 marks)

Pearson Edexcel – Specimen 1 - Paper 2 (Calculator) Foundation Tier

4.

25 Toby invested £7500 for 2 years in a savings account.
He was paid 4% per annum compound interest.

How much money did Toby have in his savings account at the end of 2 years?

£ ....

(Total for Question 25 is 2 marks)

5.

11 Theo invests £500 at a rate of 6% per year simple interest.

(a) Work out the interest he receives in one year.

(a) £ .... [2]

(b) Work out the value of his investment after 5 years.

(b) £ .... [2]

6.

23 Kay invests £1500 in an account paying 3% **compound** interest per year.
Neil invests £1500 in an account paying r% **simple** interest per year.

At the end of the 5th year, Kay and Neil's accounts both contain the same amount of money.

Calculate r.
Give your answer correct to 1 decimal place.

$r =$ .... [6]

7.

22 Claudia invests £25 000 at a rate of 2% per year compound interest.

Calculate the total amount of **interest** she will have earned after 5 years.
Give your answer correct to the nearest penny.

£ .... **[4]**

8.

23   Here are the interest rates for two bank accounts.

Northern Savings Bank (NSB)	Central Alliance Bank (CAB)
2.5% per year compound interest	2.7% per year simple interest

Mia puts £6400 in each account.

Calculate the difference in value between the two accounts after 8 years.
Give your answer correct to the nearest penny.

£ .... [6]

OCR Wednesday 8 November 2017– Morning (Calculator) Foundation Tier

9.

15 Luka invests £1500.
At the end of the first year, 2% interest is added.
At the end of the second year, after interest has been added, the investment is worth £1606.50.

Show that 5% interest has been added at the end of the second year. **[4]**

OCR Thursday 25 May 2017 – Morning (Calculator) Foundation Tier

10.

17 At the start of 2014 Priya's house was worth £240 000.
The value of her house increased by 5% every year.

Work out the value of her house at the start of 2017.

£ .... **[3]**

11.

2 Corinne invests £8400 at a simple interest rate of 12% per year.

Work out the value of the investment after 3 years.

£ .... **[3]**

12.

19 Here are the interest rates for two accounts.

Account A	**Account B**
Interest: 3% per year compound interest.	Interest: 4% for the first year, 3% for the second year and 2% for the third year.
No withdrawals until the end of three years.	Withdrawals allowed at any time.

Derrick has £10 000 he wants to invest.

(a) Calculate which account would give him most money if he invests his money for 3 years. Give the difference in the interest to the nearest penny.

(a) Account .... by .... p **[5]**

13.

26   Mia wants to borrow £6000 and repay it, with interest, after two years.

She sees two offers for loans.

Offer 1	Offer 2
Compound interest	Compound interest
3% per year	First year 1%
	Second year 5%

Mia says,

"I will pay back the same amount because the average of 1% and 5% is 3%"

Is she correct?

You **must** show your working.

[3 marks]

_____

_____

_____

_____

_____

_____

_____

_____

14.

26   Investment A   Save £150 per month for 2 years.
                         2.5% interest is added to the total amount saved.

         Investment B   Invest £3500
                         Compound interest is added at 3% per year.

After 2 years, how much **more** is investment B worth than investment A?

[4 marks]

Answer £_____

15.

14   £1700 is invested for 3 years at 4% per year **simple** interest.

Work out the total interest.

[3 marks]

_____

_____

_____

_____

_____

Answer £ _____