Question 1: True/False [5]
The rabbit population in Australia has doubled in 3 years.
This implies that the annual growth rate must be equal to 200%.
HINT: Let the initial population be \( x \).

\[
\text{TRUE} \quad \text{FALSE}
\]

Question 2: True/False [5]
A farmer sold his tractor after 7 years for an amount of R4 800.
The rate of depreciation during the time that he owned the tractor was 10,5% p.a.
To correctly calculate what the tractor cost him initially, you should do the following:

\[
A = P \left(1 - \frac{r}{100}\right)^n
\]

\[
4 800 = P \left(1 - \frac{10,5}{100}\right)^7
\]

\[
4 800 = P \left(0,895\right)^7
\]

Therefore …

\[
4 800 = P \left(0,895\right)^7
\]

\[
4 800 = P \left(0,46\right)
\]

\[
4 800 - 0,46 = P
\]

\[
P = 4 799,54
\]

Therefore, he paid R4 799,54 for the tractor.

\[
\text{TRUE} \quad \text{FALSE}
\]

Question 3: True/False [2]
Exchange rates at a bank are quoted as follows:

\[
\$ : R = 1 : 9,70
\]

\[
£ : R = 1 : 13,65
\]

Hence the dollar to pound rate should be quoted as \( 9,70 : 13,65 = 1 : 1,41 \)

\[
\text{TRUE} \quad \text{FALSE}
\]

Question 4: True/False [2]
The formula \( A = P \left(1 + \frac{r}{100}\right)^n \) is used to calculate the compound interest \((A)\) on an initial investment \((P)\) at a rate \((r)\) over a number of years \((n)\).

\[
\text{TRUE} \quad \text{FALSE}
\]
Question 5: Multiple Choice [2]
In mid 2008, the crude oil price hit record highs of about $140 per barrel. If the exchange rate at the time of dollars to rands was 1 : 8,60, then the cost of a barrel of oil in rands was ...

A  R 1204
B  $ 1204
C  R 16,28
D  $ 16,28

Question 6: Multiple Choice [4]
The gold price in mid 2008 hit record highs of about $1 100 per fine ounce. At the same time the following exchange rates were quoted at banks:

$ : R = 1 : 9,75
£ : R = 1 : 17,23

The price of gold in pounds (£) will be ...

A  £ 622,46
B  £ 18 953
C  £ 10 725
D  £ 112,82
E  £ 63,84

Question 7: Multiple Choice [4]
Factory equipment depreciates at a compounded rate of 11% p.a.
How much will equipment to the value of R9 500 be worth 9 years from now?

A  R24 301,35
B  R3 328,39
C  R950
D  R8 455
Question 8: Multiple Choice [4]
In 2006, the South African population stood at 46 000 000 to the nearest million. If this population increases at 1,2% per annum, the population after 10 years will be ... to the nearest million.

A 52 000 000  
B 6 000 000  
C 51 000 000  
D 50 000 000  
E 5 000 000

Question 9: Multiple Choice [2]
Pula is the currency of Botswana, and is the strongest currency in Southern Africa. Crossing the border, it is discovered that R1 400 ≈≈ ≈≈ P1 000. The exchange rate of rands to pula is ...

A 1,4 : 1  
B 1 : 1,4  
C 1 : 0,714  
D 1 : 7,14  
E 0,714 : 1

Question 10: Socrates [3]
Calculate how much money can be withdrawn from a bank account after eight years if an initial amount of R 4 500 was invested at 7,5% simple interest per annum. The total amount that can be drawn is R ...
Type the amount only.

Question 11: Socrates [6]
Over 10 years, an initial investment grew by R 2 990 at an annual simple interest rate of 4,6%. The initial amount invested was R ...
Type the amount only.

Question 12: Socrates [4]
The population in a certain town increases at an annual rate of 7%. If there are currently 23 688 residents, then the total population of the town after 5 years will be ...
An MP3 player costing R 3 200 is purchased on a hire-purchase agreement of 4,5% simple interest per annum over two years.
The total future payments amount to (Ans. 1) and each monthly instalment amounts to (Ans. 2).
Work to the nearest cent.

1

| R 3 494,48 | R 3 488,00 | R 200,00 |
| R 145,33  | R 295,60  | R 1 744,00 |

Question 14: Cloze [4]
Thuli buys a lounge suite valued at R 3 800 on a hire-purchase agreement of 6,5% simple interest per annum over eighteen months.
The total future payments amount to (Ans. 1) and each monthly instalment amounts to (Ans. 2).
Work to the nearest cent.

1

| R 4 170,50 | R 4 176,46 | R 232,03 |
| R 2 780,33 | R 231,69  | R 154,46 |

Question 15: Cloze [4]
A computer was purchased for R125 000. The value of the computer depreciated at a rate of 18% p.a. for 3 years.

Using the Compound Decrease Formula, r will be (Ans. 1) and n will be (Ans. 2).
The value of the computer after the 3-year period will then be (Ans. 3).

1 2 3

| 9 | 18 | 36 |
| R68 921 | R102 500 | R205 379 |
| 3 | 6 |