

XT - MATHS Grade 10

Name: _____

Class: _____

Subject: Finances

Date: _____

Total Marks: 55

Question 1: True/False [5]

Mathematics - LO 1 : AS 4

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 .

TRUE

FALSE

Question 2: True/False [5]

Mathematics - LO 1 : AS 4

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:

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

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

$$4\ 800 = P (0,895)^7$$

Therefore ...

$$4\ 800 = P (0,895)^7$$

$$4\ 800 = P (0,46)$$

$$4\ 800 - 0,46 = P$$

$$P = 4\ 799,54$$

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

TRUE

FALSE

Question 3: True/False [2]

Mathematics - LO 1 : AS 4

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 $9,70 : 13,65 = 1 : 1,41$

TRUE

FALSE

Question 4: True/False [2]

Mathematics - LO 1 : AS 4

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).

TRUE

FALSE

Question 5: Multiple Choice [2]

Mathematics - LO 1 : AS 4

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]

Mathematics - LO 1 : AS 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]

Mathematics - LO 1 : AS 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]

Mathematics - LO 1 : AS 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]

Mathematics - LO 1 : AS 4

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]

Mathematics - LO 1 : AS 4

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]

Mathematics - LO 1 : AS 4

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]

Mathematics - LO 1 : AS 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 ...

Question 13: Cloze [4]

Mathematics - LO 1 : AS 4

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		2	
----------	--	----------	--

▶ 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]

Mathematics - LO 1 : AS 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		2	
----------	--	----------	--

▶ 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]

Mathematics - LO 1 : AS 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

15 Questions, 4 Pages