



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

MATHEMATICAL LITERACY P1

COMMON TEST

JUNE 2018

Marks: 75

Time: 1 ½ hours

This question paper consists of 6 pages and addendum of 2 Annexures (3 pages).

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Use the ANNEXURES to answer the following questions:
 - Annexure A for Question 2.1
 - Annexure B for Question 3.2
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
6. Show ALL calculations clearly.
7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
8. Indicate units of measurement, where applicable.
9. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.

QUESTION 1

- 1.1 Mr Khumalo owns a few properties in the Durban CBD that are let out for rentals. The table below shows a list of his income and expenses.

INCOME	EXPENSES
Salary	Maintenance of flats and hall
Rentals from flats	Salaries for workers
Hired hall for functions	Insurance for the properties

- 1.1.1 Name Mr Khumalo's variable income. (2)
- 1.1.2 Write down one fixed expense for Mr Khumalo. (2)
- 1.2 Mr Khumalo has a cheque account with ABC bank offering 5,7% per annum interest compounded daily on the available credit balance. The table below shows an extract of his bank statement.

Date	Opening Balance	Interest Rate	Interest	Closing Balance
14/05/2018	R5 000,00	0,015616%	R0,7808	R5 000,78
15/05/2018	R5 000,08	0,015616%	R0,7808	R5 000,86
16/05/2018	R5 000,86	0,015616%	R0,7809	A

- 1.2.1 Show how the interest rate was calculated. (2)
- 1.2.2 Calculate **A**, the closing balance for 16/05/2018. (2)
- 1.3 Mr Khumalo's son Thulani has a height of 1,48m and weighs 105kg. Calculate Thulani's Body Mass Index (BMI). Round off your answer to the nearest whole number.
- You may use the formula: $BMI = \frac{\text{weight in kilograms}}{(\text{height in metres})^2}$ (2)
- 1.4 Thulani attends Morningside Primary School about 3km away from home. His father drops him at school in the morning and he walks back home after school.
- 1.4.1 Calculate the time in minutes, it takes Thulani to reach home walking at an average speed of $1,4m/sec$.
- You may use the formula: $\text{Time} = \frac{\text{Distance}}{\text{Average speed}}$ (3)
- 1.4.2 If school ends at 1:30 pm and Thulani plays hockey straight after school for $1\frac{1}{2}$ hours, use your answer from 1.4.1 to calculate his arrival time back home. (2)

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QUESTION 2

2.1 The Adam's family lives at Essenwood, corner of Cowey and Sydenham. Use the map in ANNEXURE A to answer the questions that follow.

- 2.1.1 What type of scale does the map show? (2)
- 2.1.2 Measure the distance on the map in millimeters from Adam's residence to Mitchell Park at the corner of North Ridge and Montpelier Road. Use the distance via Overport Road. (2)
- 2.1.3 Use the scale on the map to find the actual distance for 2.1.2. (2)
- 2.1.4 Name one suburb that is on the southern side of Adam's residence. (2)
- 2.1.5 Identify one recreational place that is close to the Adam's residence. (2)
- 2.1.6 Name the general direction of Kings Park from the Botanic Gardens. (2)
- 2.1.7 Convert the measurement given on the bar scale into a ratio scale. (3)

2.2 Mr Adam has a Corolla 1.6 Toyota Corolla. The average fuel consumption is 6,9 l per 100 km. The capacity of the fuel tank is 55 l.



- 2.2.1 Calculate (to the nearest kilometre) the distance his car can travel using half a tank of fuel. (3)
- 2.2.2 Mr Adam's car has a Service Plan of 150 000 km. If the mileage on his car was 67 893km at the end of May 2018 and he travels an average of 1 367 km per month, calculate the year of expiry of the Service Plan. (3)

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QUESTION 3

- 3.1 Mr Naidoo donates school shoes to disadvantaged children in the neighbouring schools. Zando(Shoe manufacturer) has agreed to sell the shoes at R100 a pair under the following conditions:
- | | |
|----------------------|-------------------------------|
| Deposit: | 20% of total cash price |
| Monthly installment: | 5% of the outstanding balance |
| Payment period: | 24 months |

- 3.1.1 Calculate the total cash price for 100 pairs of shoes. (2)
- 3.1.2 Calculate the deposit that needs to be paid for 100 pairs of shoes. (2)
- 3.1.3 Calculate the outstanding balance? (2)
- 3.1.4 Determine the monthly installment. (2)
- 3.1.5 Calculate the total amount that will be paid for the 100 pairs of shoes. (2)
- 3.1.6 State the type of interest charged for the above deal. (2)

- 3.2 Mr Naidoo is worried about his bank charges and transaction fees in his account. He visited ABSA and Standard Bank and compared the service charges shown in **ANNEXURE B**.

- 3.2.1 What does ATM stand for? (2)
- 3.2.2 Write down the charge for swiping an ABSA debit card to buy R30 MTN airtime at Pick'n Pay till (POS)? (2)
- 3.2.3 Write down the formula used by Standard bank to calculate the bank charges for cash deposit at the Branch counter. (2)
- 3.2.4 How much will an ABSA bank account holder be charged for depositing R500 cash into his or her account at the ATM? (2)
- 3.2.5 Calculate the charge for depositing R350 cash at Standard Bank branch counter. (3)

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QUESTION 4

- 4.1 Feed the Babies Foundation has volunteered to provide one meal in each of these schools in the disadvantaged communities throughout the country. Yummy Life Company suggested to the foundation some of the best instant meals that need boiling water only.



- 4.1.1 Water boils at 100°C . Convert this temperature to $^{\circ}\text{F}$.

You may use the formula: $^{\circ}\text{C} = \frac{5(^{\circ}\text{F} - 32)}{9}$ (3)

- 4.1.2 Each packet (500g) of couscous mixes with 1,5 cups of boiling water. If one cup is 250ml, calculate the total amount of boiling water, in litres, needed for 37 packets of instant meal. (4)

- 4.1.3 Calculate the number of kilograms of couscous needed to feed a school with an enrolment of 693 learners.

Note: One learner eats 500 g of couscous (3)

- 4.2 The estimated inflation rate for 2019 and 2020 is 5,5% per annum.

- 4.2.1 Calculate the average monthly inflation rate for 2019 and 2020. (2)

- 4.2.2 Calculate the expected price of the 500g packet of couscous in 2020 if the current price is R37. (4)

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TOTAL: 75



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ADDENDUM

JUNE 2018

This addendum consists of 3 pages with 2 annexures.

ANNEXURE A
QUESTION 2.1

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ANNEXURE B**QUESTION 3.2****Comparing Different Bank Charges**

TRANSACTION	ABSA	STANDARD BANK
Monthly Fees		
Monthly administration fee	R45,39	R60,53
Deposits		
Cheque deposit: Branch counter	R40,35	R42,37
Cheque deposit: Own ATM	No Charge	R42,37
Cash deposit: Branch counter	R8,07 + 1,61% of deposit value (min R35,31)	R8,07 + R1,82/R100 or part thereof (min R40,35)
Cash deposit: Own ATM	R4,54 + R1,41/R100	R1,82 per R100 or part thereof
Cash Withdrawals		
Branch counter	R60,53 + R1,66/R100	R40,35 + R1,82/R100 or part thereof
Own ATM	R4,54 + R1,41/R100	R1,82/R100 or part thereof
Cheque Encashment		
Own Branch	R60,53 + R1,66/R100 plus cheque issued fee of R100,88	R141,23 + R1,82/R100 or part thereof
Purchases		
Prepaid Top-Up at Own ATM, POS, Online, Mobile, Telephone (IVR)	R1,51	Online purchases are FREE
Purchases with Cash Back Online		R1,82
Prepaid Top-Up at Own supported ATM	R4,54	R1,11