SOUTH AFRICAN COMPREHENSIVE ASSESSMENT INSTITUTE
SUID-AFRIKAANSE KOMPREHENSIEWE ASSESSERINGSINSTITUUT

Adult Basic Education and Training (ABET)

Summative Assessment

Mathematical Literacy: NQF Level 1

Examination session: November 2024

Total Marks: 100 marks

Time: 3 hours

Number of pages: 21 pages

Learner Information

Candidate Number _____

Centre Name _____

Date _____

PROUDLY SOUTH AFRICAN

EXAMINATION RULES FOR CANDIDATES

1. Candidates are bound in all matters relating to the examination to obey the instructions of the chief invigilator. The chief invigilator, where relevant, determines the dress code.
2. Candidates must be identified before they are permitted to write an examination. Identity document must be produced when required. All candidates are to sign the attendance register.
3. Candidates will not be admitted to the examination room if they arrive an hour or more after the start of the examination. Candidates who have finished answering an examination paper within fifteen minutes of stopping time will not be allowed to leave the examination room, provided there are still candidates writing.
4. Candidates must occupy the places first allocated to them for the entire duration of the examination and for all other examination sessions, unless otherwise directed by the chief invigilator.
5. No explanation of examination questions may be asked or given by any person.
6. No candidate is allowed to leave the examination room within the first hour of the examination, except in an emergency and under supervision.
7. A candidate may only be allowed to leave the examination room in the case of an emergency or to go to the toilet, and in these cases, this must be done under supervision.
8. As soon as a candidate hands in his or her answer script, he or she must leave the examination room.
9. A candidate must carefully read and comply with the instructions, which appear in his or her question paper and the examination timetable.
10. A candidate is not allowed to assist another candidate or try to assist him or her or communicate with another candidate. Should this occur, it would constitute an irregularity. Invigilators are expressly forbidden from assisting candidates in the answering of questions.
11. All questions must be directed to the invigilator.
12. A candidate may not cause a disturbance in the examination room or behave in an improper or unseemly manner.
13. A candidate may not disregard the instructions of the invigilator or may not conduct themselves in a manner that conflicts with the instructions of the chief invigilator.
14. The following are not allowed next to the candidate in the examination room: suitcases, school bags, Walkmans, CD players, cellphones, books, dictionaries, notes, sketches or paper other than the official examination material distributed by the chief invigilator. Slide-rules and non-programmable, silent calculators may be used, unless expressly prohibited in the question paper. Pens, erasers, rulers, etc. should be kept in transparent containers/bags. No borrowing is allowed. Wristwatch alarms must be switched off.
15. Candidates should be informed that the possession of notes constitutes an irregularity regardless of whether or not the notes are used. The excuse that a candidate has forgotten or was not aware that he or she has the unauthorised material listed in paragraph 14 in his or her possession will not be accepted.
16. No examination answer books (or part of an answer book), whether used or unused, may be removed from the examination room. Should this occur, it will be considered an irregularity and the candidate will receive NO credit for the examination. Should a candidate write the wrong subject or wrong grade of a subject, this will be a technical irregularity and will lead to the candidate's results being blocked/cancelled/delayed.
17. Should a candidate miss an examination due to illness, a valid doctor's certificate must be given to the chief invigilator. A Certificate will not be awarded to candidates who miss an examination.
18. Any candidate who disregards these rules or the instructions of the chief invigilator or his / her assistants, will have committed an offence in terms of the Regulations [Regulation 6 2(a) and (b)] or a contravention of the Rules [Rule 3(2)].

INSTRUCTIONS

1. Answer **ALL** the questions in the space provided.
2. Write in blue or black pen only.
3. A calculator may be used but **ALL** calculations must be shown.
4. Round off your answers to TWO decimal places, unless otherwise stated.

Question 1

1.1 Circle the correct letter. The place value of the 7 in 181,75 is:

A Tens
B Units
C Tenths
D Hundredths

(1)

1.2 Fill in the missing word or words:

3×10^8 equals _____ million.

(1)

1.3 Consider the number 225.

1.3a Write 225 as the product of two squares, both greater than 1.

_____

(1)

1.3b Use your answer to 1.3a to find $\sqrt{225}$. Show working.

_____

(1)

1.4 Circle all the rational numbers:

$-\frac{3}{4}$ $\sqrt{48}$ 3,1764... 0 9,781

(2)

1.5 Circle the correct letter. $2^{-3} =$

A -6
B -8
C $\frac{1}{6}$
D $\frac{1}{8}$

(1)

1.6 Complete the statement.

$563 \div 70 = 560 \div 70$ remainder _____

(1)

Question 1 continues on the next page.

1.7 Round off to the nearest Rand: R4 781,49 R_____

(1)

1.8 Circle the number that is closest to 7.

A $6,\dot{9}$

B 7,04

C – 7

D $7\frac{1}{9}$

(1)

[10 marks]

Question 2

Calculate the value of the following without using a calculator. Show working.

2.1 $2\frac{3}{4} \times 3\frac{1}{5} - 8$ Write the answer in simplest fraction form.

(3)

2.2 $10 - 4(2{,}4 - 1{,}9)^2$

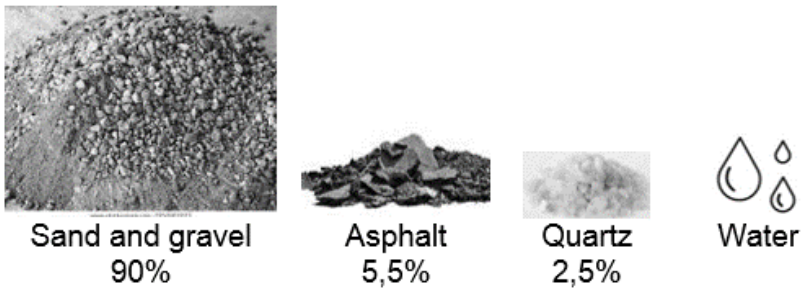
(3)

[6 marks]

Question 3 is on the next page.

Question 3

3.1 Bandile fixes a pothole in the road using a cold tar mixture. This is a mixture of sand and gravel (90% by mass), asphalt (5,5%), quartz (2,5%), and water.



3.1a Give the ratio of the mass of asphalt to the mass of quartz in the cold tar. Write the answer as a ratio of whole numbers in simplest form.

(1)

3.1b What mass of quartz is in a load of cold tar that contains 8,8 kg asphalt? Show working.

(2)

3.1c A load of cold tar has a mass of 450 kg. Calculate the mass of water in the load. Show working.

(2)

3.1d Find the volume of water in the load described in question 3.1c. Give the answer in litres. Note: 1 ml water has a mass of 1 g and 1 kg = 1 000 g.

(1)

Question 3 continues on the next page.

3.2 Busisiwe leaves home at 06:40 and drives 14,7 km to work. She arrives at 07:22.

3.2a How long does Busisiwe take to get to work? Give the answer in hours, as a decimal fraction. Show working.

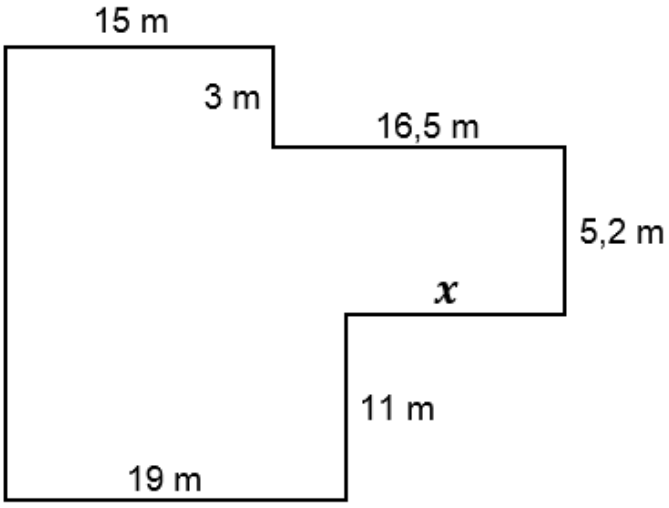
(2)

3.2b What is Busisiwe's average speed? Show working.

(2)
[10 marks]

Question 4

4.1 All the angles of the given shape are right angles.



4.1a Calculate the length x. Show working.

(2)

4.1b Draw dotted lines on the shape to show how you will calculate its area.

(1)

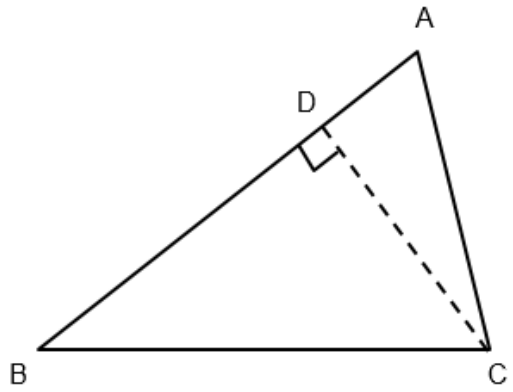
Question 4.1c is on the next page.

4.1c Calculate the area of the shape. Show working.

(1)

4.2 In the diagram, DC is perpendicular to AB.
AB = 84,5 cm and DC = 69,2 cm.

Calculate the area of triangle ABC.
Show working.



(2)

4.3 Rectangle ABCD has AB = CD = 8 m and BC = AD = 11 m.

4.3a If all the sides of the rectangle are multiplied by 10, what is the area of the new rectangle? Show working.

(2)

4.3b Another new rectangle is made, with all its sides half as long as the sides of ABCD. Select the correct statement.

A The area of the new rectangle is half as much as that of ABCD.

B The area of the new rectangle is one quarter as much as that of ABCD.

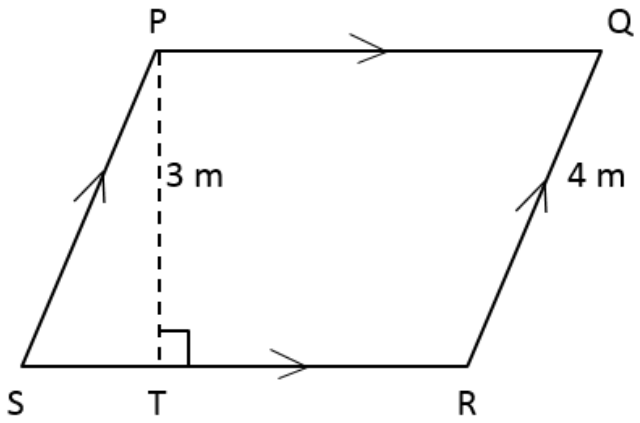
C The area of the new rectangle is one eighth as much as that of ABCD.

D The area of the new rectangle is one sixteenth as much as that of ABCD.

(1)

Question 4 continues on the next page.

4.4 PQRS is a parallelogram and PT is perpendicular to SR. The perimeter of PQRS is 20 m.



4.4a Determine the length of SP. Give a reason.

(1)

4.4b Determine the length of ST. Show working and give a reason. Round off to one decimal place.

(2)

4.4c Determine the length of SR. Show working and give a reason.

(2)

4.4d Determine the length of TR.

(1)

[15 marks]

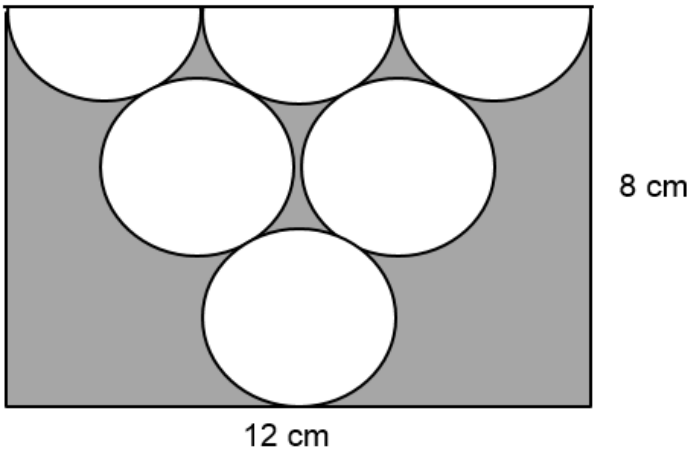
Question 5 is on the next page.

Question 5

5.1 A circle has a radius of 17 cm. Calculate the circumference. Give the answer to 2 decimal places. You may use the formula: **Circumference of circle $\mathbf{C = \pi D}$** where $\pi = 3{,}14$ and D = diameter.

(2)

5.2 Three circles and three semicircles of the same radius are arranged on a rectangle.



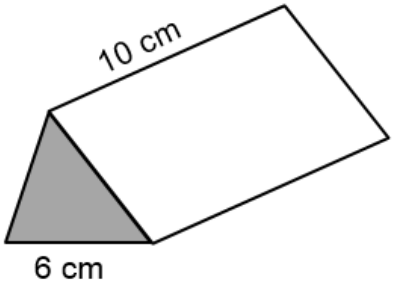
5.2a Write down the length of the radius. _____ cm

(1)

5.2b Calculate the shaded area. Show working.

(4)

5.3 An object lies on a table. Refer to the diagram.



Question 5.3a is on the next page.

5.3a Name the object.

(1)

5.3b How many edges does the object have? _____

(1)

5.3c Determine the area of the unseen face lying on the table.

(1)

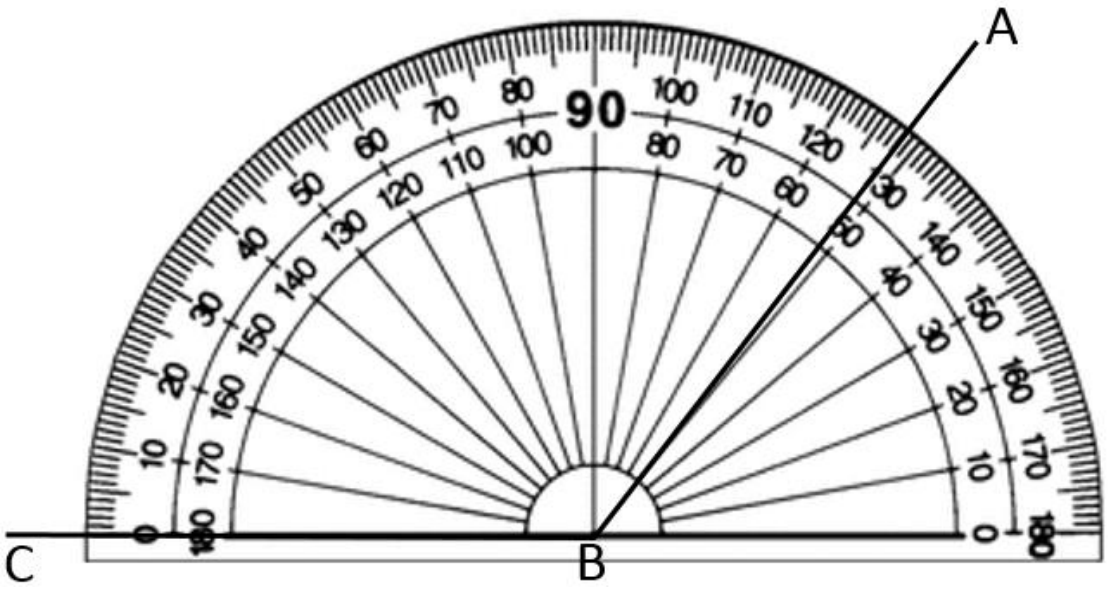
5.3d If the area of the shaded triangle is 15,7 cm^2, determine the volume of the object. Show working.

(2)

[12 marks]

Question 6

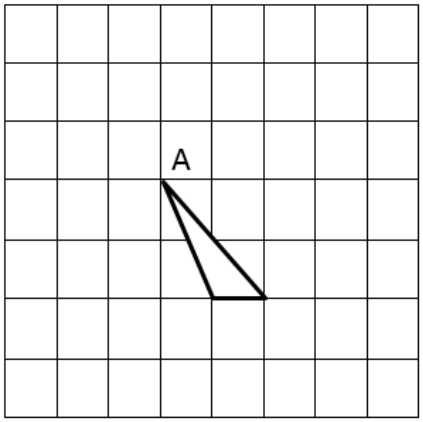
6.1 Use the given protractor to measure angle $A\hat{B}C$.



(1)

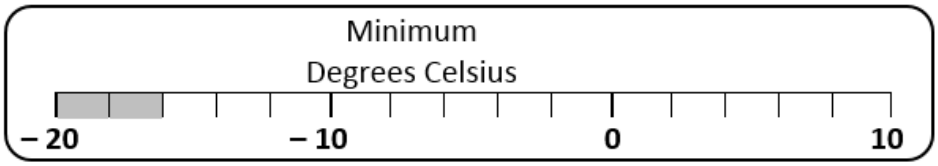
Question 6 continues on the next page.

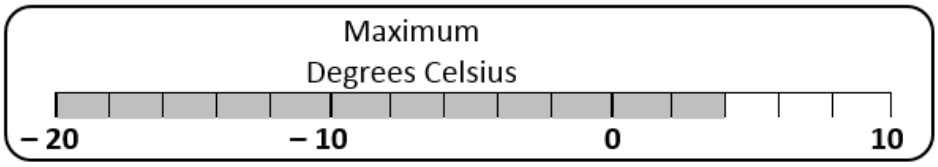
6.2 The triangle is rotated 180° clockwise about its vertex A.
Draw the new position of the triangle on the grid.



(2)

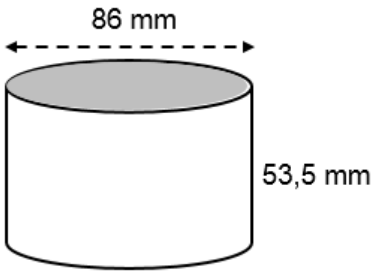
6.3 Find the difference between the maximum and minimum temperatures on the thermometers shown. Show working.





(2)

6.4 Determine the volume of the cylinder.
Show working.
You may use the formula:
Volume of cylinder $V = \pi r^2 h$
where $\pi = 3{,}14$, r = radius and h = height.

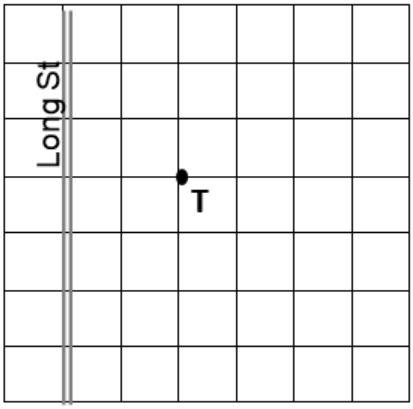


(2)
[7 marks]

Question 7 is on the next page.

Question 7

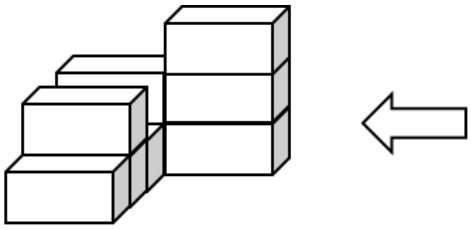
7.1 Jabu starts from a tree, T, and walks 40 m west to Long St, where he turns left. He continues for 80 m to a shop. He then turns to the east and walks for a further 100 m to a house. Each block of the map represents 20 m by 20 m.



Draw Jabu's route to scale on the map above. Draw arrows to show the directions. Label the shop with the letter S and the house with the letter H.

(3)

7.2 A stack of square-based prisms is arranged as shown.



7.2a Draw the view from the right, as indicated by the arrow.

(2)

7.2b Each prism has a length 5 cm, and the edge of the square faces is 2 cm. Calculate the volume of the stack of prisms. Show working.

(2)

[7 marks]

Question 8

8.1 Rethabile lists all the items ordered at a canteen.

Chicken	Salad	Chicken	Salad	Chips	Beef	Soup
Beef	Soup	Chips	Salad	Chicken	Beef	Chicken
Chips	Chicken	Beef	Beef	Chips	Salad	Chicken
Soup	Chips	Chicken	Chicken	Soup	Chips	Chips
Salad	Soup	Salad	Chips	Chicken	Soup	Salad

8.1a Complete the tally and frequency table below.

Item	**Tally**	**Frequency**
Chicken	𝍸 | | | |	9
Salad		
Chips		
Beef		
Soup		
Total		35

(3)

8.1b What is the mode item? _____

(1)

8.1c Determine the relative frequency of chips.

_____

(1)

Question 8 continues on the next page.

8.2 Rethabile makes a two-way table of the number of burgers and toasted sandwiches ordered by men and women.

Item	**Men**	**Women**	**Total**
Burgers	17	11	28
Toasted sandwiches	12		32
Total		31	

8.2a Complete the table.

(2)

8.2b How many more men than women had burgers?

(1)

8.3 The amounts spent by customers at a spaza shop are recorded in the stem and leaf diagram. The amounts are in Rands.

Tens	Units
7	0 0 3 6
6	1 8
5	2 3 3 3 9
4	0 5 5 7 8 9
3	0 5 8
2	0 1 1
1	3 7 9 9

8.3a What is the range in amounts spent? Show working.

(2)

8.3b What is the median amount spent? _____

(1)

8.3c How many amounts spent are between R34 and R54? _____

(1)

[12 marks]

Question 9 is on the next page.

Question 9

9.1 An increasing number of cases of pink-eye were reported in KwaZulu Natal during March 2024. The table shows the figures provided by the media.

Date (2024)	29 February	1 March	3 March	22 March
Number of cases	161	808	1 044	13 593

9.1a Fill in the point for 22 March on the graph that follows.

(1)

9.1b Determine the percentage increase in cases of pink-eye from 3 March to 22 March. Refer to the table. Round off to the nearest percentage. You may use the formula:

$$\textbf{Percentage increase} = \frac{\textbf{Final amount} - \textbf{initial amount}}{\textbf{Initial amount}} \times \textbf{100}\%$$

(2)

Question 9.1c is on the next page.

9.1c Select the most accurate summary of the number of pink-eye cases over the given time period.

A There was a steady increase in the number of cases.
B There was a slight decrease in the number of cases near the beginning.
C There was a slow increase at first, followed by a very high increase.
D There was a very high increase at first, followed by a slow increase.

(1)

9.2 StatsSA publishes figures of the number of tourists visiting South Africa. The number of tourists from the SADC countries for 2020 and 2021 is given in the table, rounded off to the nearest thousand.

Country	**Tourists (Thousands)**	
	2020	**2021**
Mozambique	15	51
Zimbabwe	19	41
Lesotho	6	34
Eswatini	7	18
Botswana	3	11
Other SADC countries	14	28
Total	64	183

9.2a Give the total number of tourists from Lesotho, Eswatini and Botswana in 2020.

(1)

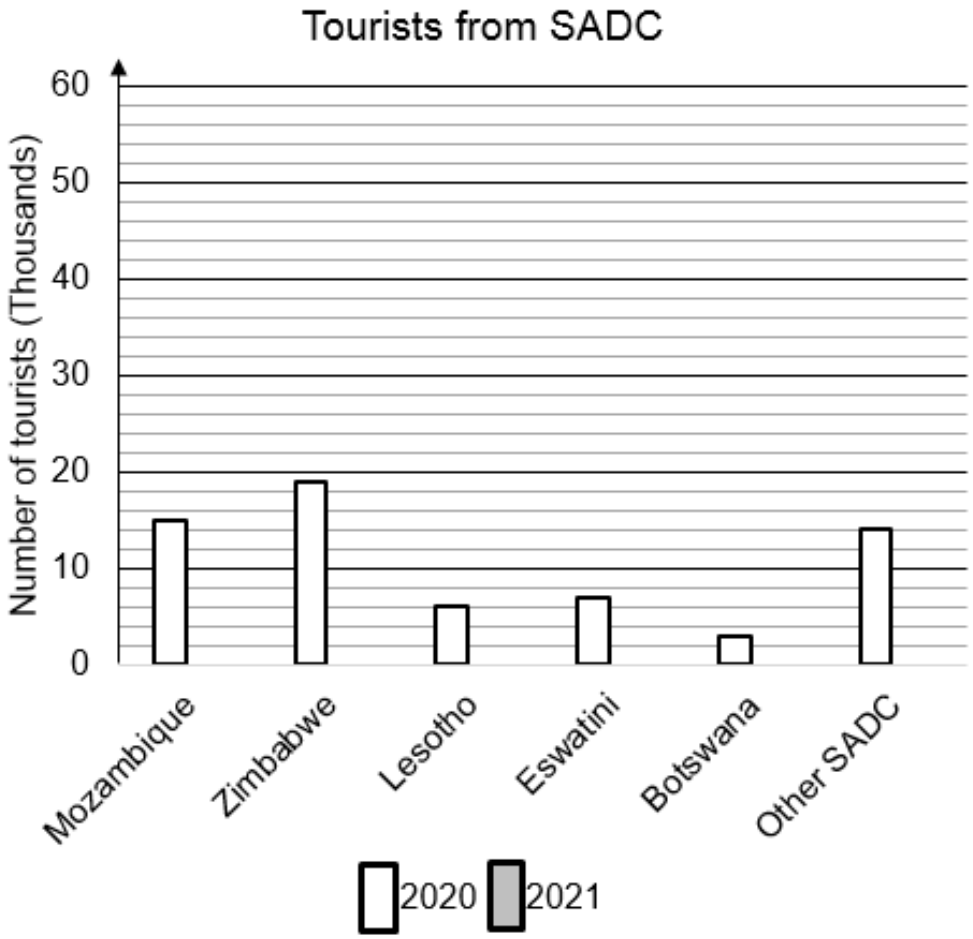
9.2b True or false? There were more tourists from Lesotho than Eswatini in both years. Give a reason for your answer.

True or false: _____ Reason: _____

(2)

Question 9.2c is on the next page.

9.2c Complete the double bar graph, using data from the table.



(2)

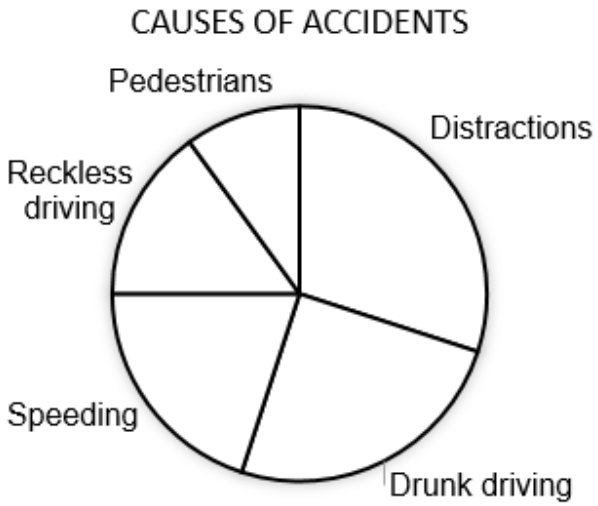
9.2d Which country had the second-largest increase in tourists from 2020 to 2021?

_____

(1)

Question 9 continues on the next page.

9.3 Mandla conducted a survey of the causes of motor vehicle accidents in his town for one year. Refer to the pie diagram.



9.3a Indicate the main cause of accidents.

_____

(1)

9.3b Give an example of driver behaviour that describes your answer to question 9.3a.

_____

(1)

9.3c There were 850 accidents in Mandla's town in the year. Estimate the number of accidents caused by drunk driving. Round off to the nearest 100. Show working.

_____

_____

(2)
[14 marks]

Question 10 is on the next page.

Question 10

Read the report and answer the questions.

> There are some 4,000 murders a year in the 27 member states of the European Union (EU) comprising almost 450 million people.
> South Africa, with a population of 60 million, had almost 28,000 murders last year.
>
> [Source: Daily Maverick, 12 March 2024]

10.1 Calculate the number of murders per million people for the EU and for South Africa. Show working. Round off answers to the nearest ten.

(2)

10.2 Compare the number of murders per million people in South Africa and the EU. Select the correct statement.
South Africa has approximately:

A 5 times as many murders per million people as the EU.

B 50 times as many murders per million people as the EU.

C 500 times as many murders per million people as the EU.

D 5 000 times as many murders per million people as the EU.

(1)

10.3 Calculate the mean number of people in a member state of the EU. Show working. Round off to the nearest whole number.

(2)

10.4 If a member state of the EU has a population of 7 000 000, what is the predicted number of murders for one year in that state? Use the answer to question 10.1. Show working.

(2)
[7 marks]

GRAND TOTAL: 100 MARKS

END OF EXAMINATION

For Office Use Only

Question	Maximum Mark	Learner's Mark	Moderated Mark
1	10		
2	6		
3	10		
4	15		
5	12		
6	7		
7	7		
8	12		
9	14		
10	7		
Total	100		
Percentage			
Final Grading			

Name and Surname of Marker **Date of Marking**

Name and Surname of Moderator **Date of Moderation**

Name and Surname of Umalusi Official **Date of Moderation**