KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA



NATIONAL SENIOR CERTIFICATE

GRADE 10

MATHEMATICAL LITERACY

COMMON TEST

SEPTEMBER 2022

Stanmorephysics.com

MARKS: 75

TIME: 1 ½ hour

This question paper consists of 9 pages.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper.
3. Start EACH question on a NEW page.
4. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Round off ALL the final answers to TWO decimal places, unless stated otherwise.
7. Indicate units of measurement, where applicable.
8. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. Write neatly and legibly.

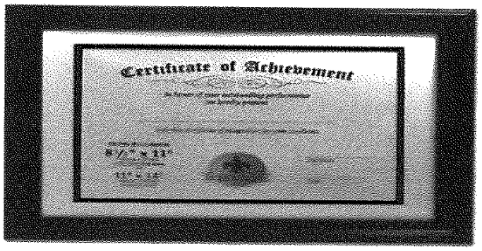
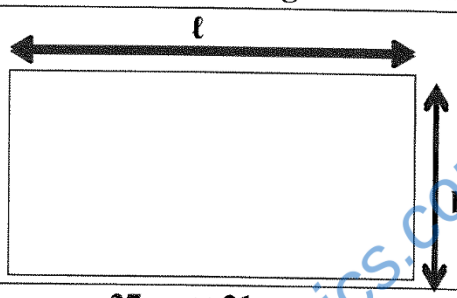
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QUESTION 1

1.1

A Mathematical Literacy educator attended the Matric Top teacher's Achievers Awards Ceremony organized by her District. She is one of the teachers who obtained 100% and 4 Level 7's out of 60 learners in the October/November 2021 examination. The awards include a certificate and R5000 cash. The awards ceremony was held on the 11 of February 2022.

Picture of a rectangular certificate	Dimensions of a rectangular certificate
	
	27cm × 21 cm

Use diagram and the information above to answer the questions that follow.

1.1.1 Write down the date on which the awards ceremony was held. (2)

1.1.2 Write the cash amount won in words. (2)

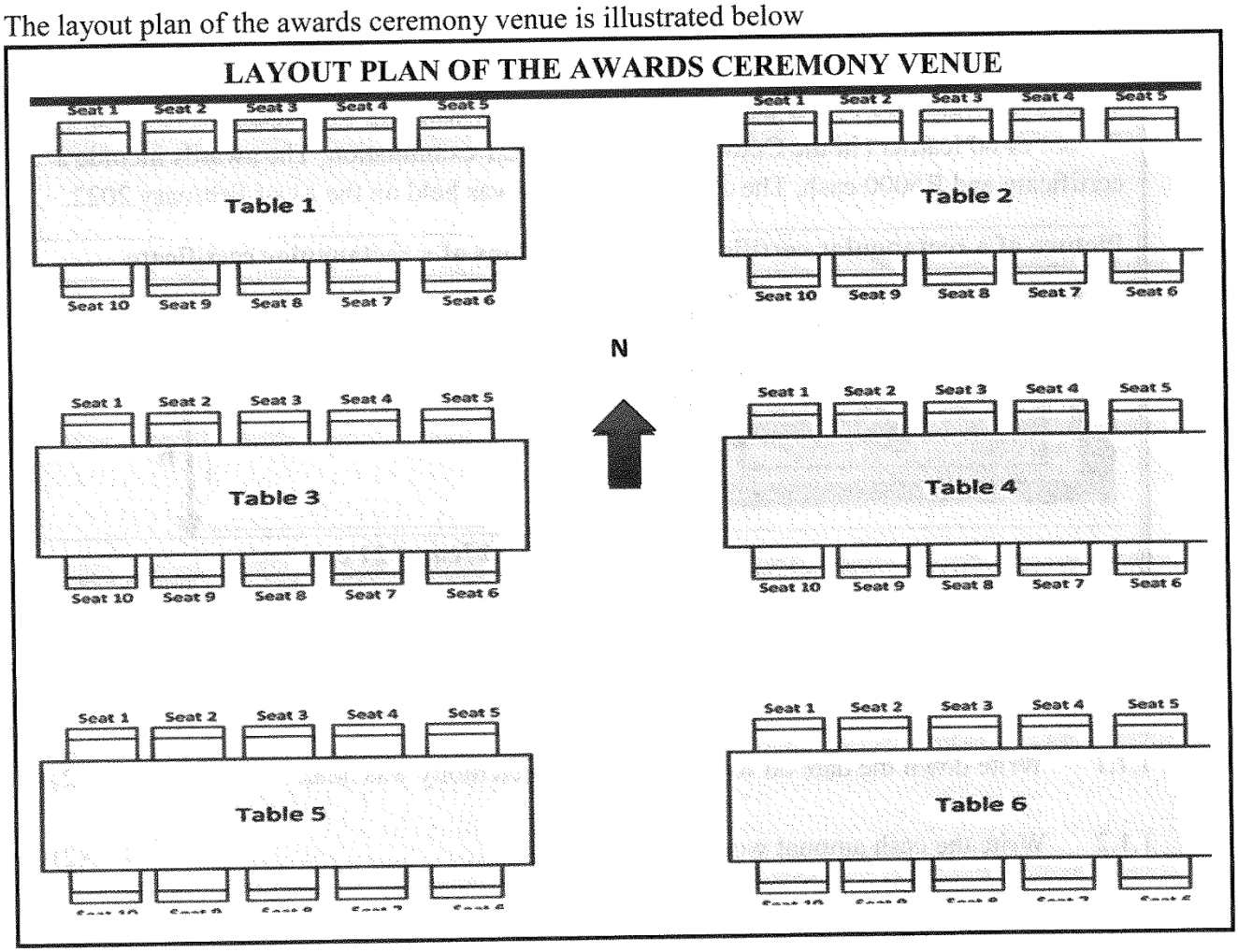
1.1.3 Determine the length of the certificate. (2)

1.1.4 What is the probability of the awards ceremony attended on the 10th of February 2022? (2)

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1.2 The layout plan of the awards ceremony venue is illustrated below



1.2.1 Define the term "*layout plan*" in the given context. (2)

1.2.2 Write down the number of people who attended the awards ceremony if all seats were occupied. (2)

1.2.3 State the general direction of table 6 from table 3. (2)

1.2.4 Measure the length of table 1 in cm. (2)

[16]

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QUESTION 2

2. Mr Avern received a bank statement from ABC bank. TABLE 1 below shows the part of the statement from 1 May 2022 to 28 May 2022.

NOTE: 1 May 2022 was a public holiday.

TABLE 1: Mr Avern's Bank Statement

Mr Avern 27 Stanger Rd Stanger		Period : 1May 2022 to 28 May 2022 Account Number : 443112****	
Date	Details	Transaction	Balance
01/05/22	Opening balance		-R2 500
01/05/22	Interest	R20,00	-R2 520
04/05/22	Deposit (EFT)	**A**	R13 000
05/05/22	POS Purchase	R370,30	**B**
14/05/22	Cash Withdrawal	R5 560	R7 069,70
28/05/22	Closing balance		

***POS – point of sale**

Use TABLE 1 and the information above to answer the questions that follow.

2.1 Define the term "*opening balance*" in the given context. (2)

2.2 Determine the value of **A** and **B**. (4)

2.3 State with reason why some of the digits in the account number are not shown. (2)

2.4 Mr Avern withdrew R5 560 on the 14/05/22 from the other bank ATM.

Determine the bank charges for his transaction.

You may use the formula:

Bank transaction fee = R2,00 + R1,20 per R100 (or part thereof) (3)

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2.5 Mr Avern decides on using EFT for any transactions, TABLE 2 below shows the transaction fees that will be applicable.

TABLE 2: EFT transactional fee

Amount (R)	R500	R1000	…	**D**	R3200
Transaction Fee	R8,00	**C**	…	R32	R32

***Minimum transaction fee is R6.20**

***Maximum transaction fee is R32.00**

Use the information above to answer the questions that follow.

Calculate the following values from TABLE 2 above.

You may use the following formula:

EFT transaction fee = R2 + R1,20 per R100 (or part thereof)

2.5.1 **C** (2)

2.5.2 **D** (3)

2.5.3 Explain the meaning of *"part thereof"* in the above formula. (2)

2.5.4 Give a reason why you think there is a maximum transaction fee used by the banks. (2)

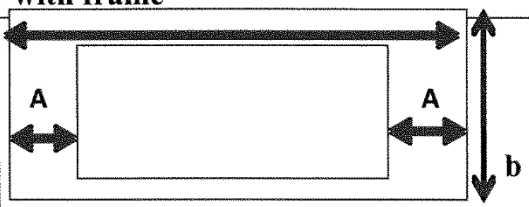
[20]

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QUESTION 3

3.1

The district likes the frame of the certificate to be painted in black and the front to be covered with a glass as shown in the picture below.

Picture of a rectangular certificate with frame	**Dimensions of a rectangular certificate with frame**
	
	Outer frame = 27cm × 21 cm **Inner frame = 25cm × 18 cm**

Use the information above to answer the questions that follow.

3.1.1 Calculate the value of **A**, the width of the frame of the certificate, in centimeters. (4)

3.1.2 Determine the total length around the frame in centimeters.

You may use the formula:

Perimeter of a rectangle = 2 (ℓ+ *b*), where ℓ= length and *b* = breadth (2)

3.1.3 The area of the inside section of the certificate is 450 cm^2; hence calculate the area of the wooden frame section in square centimeters.

You may use the formula:
Area of the wooden frame = Area of the whole certificate – Area of the inside section. (3)

3.1.4 Ramound, the certificate designer, says it will take him 5 hours to design 60 certificates if it takes him 5 minutes to design 1 certificate.

Verify, showing all calculations, whether the statement is correct. (4)

3.1.5 Give ONE reason why a glass cover is put in front of the certificates. (2)

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3.2

A bank consultant advises the educator to deposit the R5000, 00 she received from the awards in a fixed deposit at an interest rate of 5,5% per annum simple interest.

a) Write the interest rate per annum as a decimal. (2)

b) Calculate the interest that the educator will receive after 3 years. (3)

3.3

The certificates will be packed in a box as shown in the picture below (top view). Five certificates can be stacked on top of each other. The dimensions of the box that the certificates are to be packed into is 100 cm by 100 cm.

Picture of a rectangular box that the certificates will be packed into:



Use information above to answer the questions that follow.

3.3.1 Calculate the number of certificates that will fit in ONE box. (5)

3.3.2 Give one reason why it is advisable to leave a space between the certificates and the sides of the box when packing. (2)

[27]

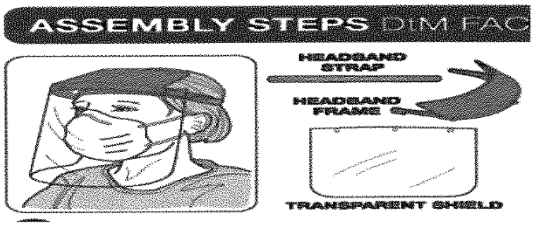
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QUESTION 4

4.

Sinethezekile High school Mathematical Literacy educator prepared an activity for her Grade 10 learners on assembling the Face Shield.

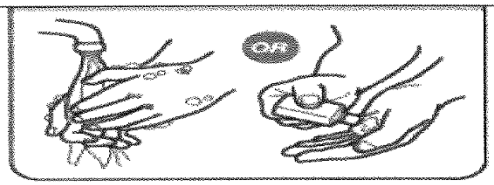
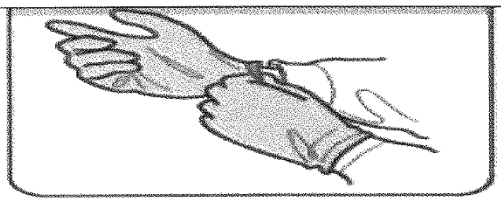
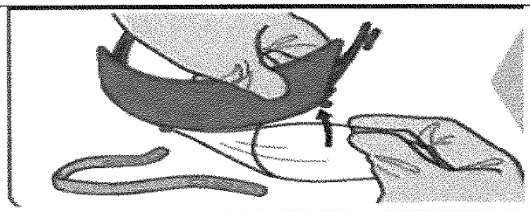
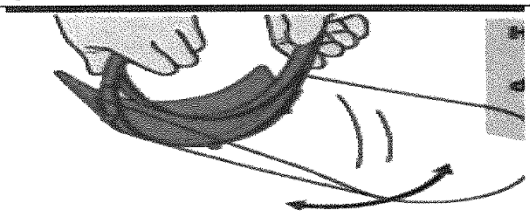
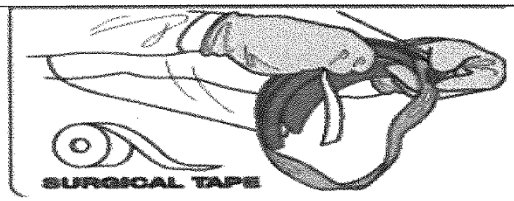
PICTURE OF A COMPLETELY ASSEMBLED FACE SHIELD



[Source:www.av8tor.co.za]

Use information above to answer the questions that follow.

4.1 Assist the learners by writing the **assembling steps** (1 to 5) represented by each picture.

1.	
2.	
3.	
4.	
5.	

(10)

4.2 Give one valid reason why are the assembly instructions given in both pictures and word form?

(2)

[12]

TOTAL: 75

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