education

Department of Education
FREE STATE PROVINCE

Stanmorephysics.com

NOVEMBER EXAMINATION 2022

GRADE 10

Stanmorephysics.com

MATHEMATICAL LITERACY

PAPER 2

MARKS: 75

TIME: $1\frac{1}{2}$ HOURS

This question paper consists of 6 pages and 3 ANNEXURES.

Copyright reserved

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 2.2
   - ANNEXURE C for QUESTION 3.2

3. Number the questions correctly according to the numbering system used in this question paper.

4. An approved calculator (non-programmable and non-graphical) may be used unless stated otherwise.

5. Show ALL calculations clearly.

6. Round off ALL final answers appropriately according to the given context, unless stated otherwise.

7. Indicate units of measurement, where applicable.

8. Start EACH question on a NEW page.

9. Write neatly and legibly.



Copyright reserved

QUESTION 1

1.1 Mr Sethole bought a swimming pool for his children to use during December holidays. The swimming pool has a diameter of 1 830 cm.



Use the information above to answer the questions that follow:

1.1.1 Define the term *diameter* according to the given context. (2)

1.1.2 Calculate the radius of the swimming pool in metres. (3)

1.1.3 To calculate the circumference of the swimming pool, Mr Sethole had to choose from the list of formulae given below. Which formula is the correct one?

A. Circumference of the circle = 3,142 × radius

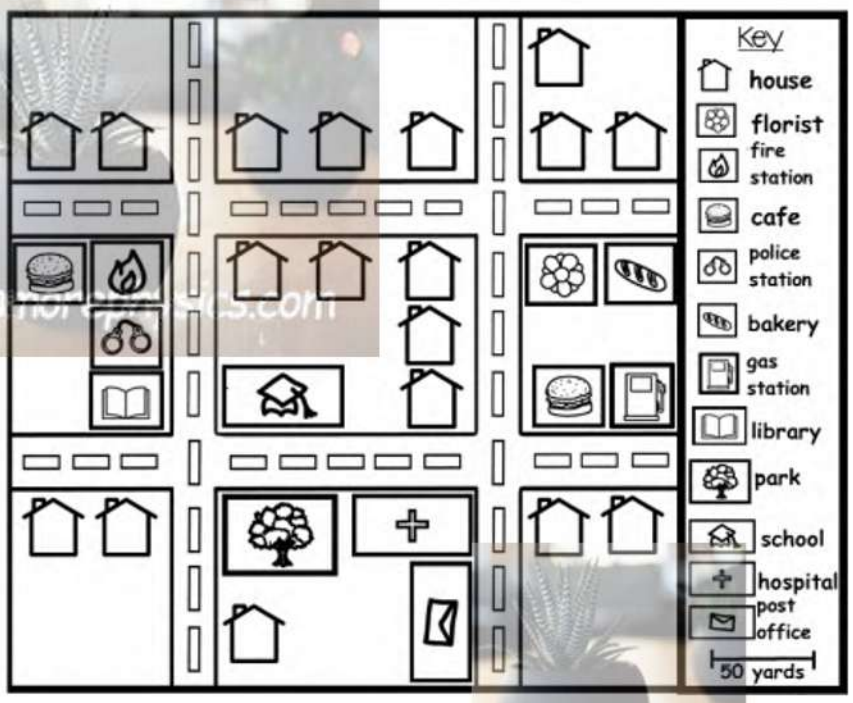
B. Circumference of the circle = 3,142 × diameter

C. Circumference of the circle = 2 x 3,142 × diameter

D. Circumference of the circle = 3,142 × radius ^{2}

(2)

1.2 The following is a layout plan of a neighbourhood:



[Source: www.http//getdrawings.com]

Study the layout plan and answer the following questions.

1.2.1 How many houses are there in this neighbourhood? (2)

1.2.2 Which building is located directly next to the park? (2)

1.2.3 The type of the scale used on the map to determine the actual distance is a bar scale. Measure the length of the scale in centimetres. (2)

1.2.4 Determine the probability (as a common fraction) of finding a post office out of all the buildings, except the houses, in this neighbourhood. (2)

[15]

QUESTION 2

2.1 Mr Mofokeng's youngest son Thabang and his fiancé are going to get married. They have chosen a hall for their ceremony and decided on how the seating plan should look like for the reception. The seating plan is shown in ANNEXURE A.

Refer to the seating plan in ANNEXURE A and answer the questions below:

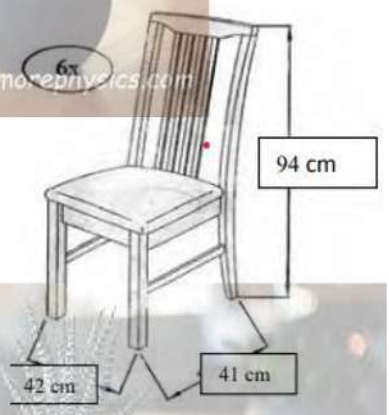
2.1.1 Determine the number of people that will be accommodated in the hall. (2)

2.1.2 Provide one reason why there are no chairs arranged on the shorter side of the table. (2)

2.1.3 A person seated at Table 9, on the side of the wall, want to put her gift on the gift table. Describe a possible route this person can take without walking over the dance floor. (2)

2.1.4 Tables 1, 2 and 3 are reserved for the bridal couple, parents of the couple, 1 bridesmaid and 1 best man. Guests sit at the rest of the tables. Calculate the probability that, if you are invited as a guest, you will be sitting at a table with an even number. Write your final answer as a percentage. (2)

2.2 Mrs Smit bought a set of six chairs that she will use in the hall. She must assemble all the chairs before she can use it. The picture alongside shows an assembled chair.



ANNEXURE B shows the pieces and the desired quantities required to assemble the **six** chairs. It also shows the steps to follow to assemble one chair.

Use **ANNEXURE B** to answer the questions that follow:

2.2.1 Determine the number of JCBC screws required to assemble ONE chair. (3)

2.2.2 By referring to the picture of the chair above, determine which part(s) of the chair still needs to be fitted onto the chair in STEP 2. (3)

2.2.3 The package of parts comes with a tool that is used to fasten or loosen the screws. Write down the name of this tool. (2)

2.2.4 The actual height of the chair as indicated on the diagram is 94 cm. If it is placed in a box that allow 1cm EACH side for packaging, what will the dimensions of the box be? (4)

[20]

Stanmorephysics.com

QUESTION 3

3.1

FIGURE 1	FIGURE 2
	 **NOTE: 12:59 a.m.**

Study the figures above to answer the following questions:

3.1.1 Identify the type of clock represented by figure 1 and figure 2. (2)

3.1.2 Write the time indicated by the clock in figure 1 in words. (2)

3.1.3 What does **a.m**. in figure 2 mean? (2)

3.2 Tshepang Monokwane wants to prepare popsicles for his birthday party. The temperature on the day of his birthday party will be 32 °C. The recipe and ingredients that Tshepang will use to make the popsicles are given on ANNEXURE C.

Use ANNEXURE C and the information above to answer the questions that follow:

3.2.1 If Tshepang uses the recipe as given in ANNEXURE C, how many popsicles will he make? (2)

3.2.2 Tshepang decided to invite 15 friends to his birthday party, how many grams of whole strawberries will he need to make popsicles for himself and his friends? (4)

3.2.3 The party starts at 13:00 and Tshepang starts making the popsicles at 07:00 a.m. Tshepang prepare one batch of posicles (as per recipé) at a time but freeze all popsicles at the same time. Will the posicles be ready when the party starts? Verify your answer with calculations. (6)

3.2.4 The temperature on the day of the party will be 32 °C. What does the symbol °C stands for? (2)

[20]

QUESTION 4

Sam would like to design a vegetable garden. The measurements (dimensions) of Sam's vegetable garden are given below:



Width of the gate = 1 m

Use the information above to answer the questions that follow.

4.1 Define the term *perimeter* according to the given context. (2)

4.2 Calculate the perimeter of the garden. (3)

4.3 Sam would like to put a fence around his vegetable garden. Each panel is 1,5 m wide and can be cut up into smaller pieces. How many panels does he need? Show all your calculations. (4)

4.4 Calculate the area of the garden.

You may use the following formula:

Area of rectangle = length × width (4)

4.5 Sam would like to fertilize the garden before he starts planting. He needs 100 g of fertilizer per m². The bags of fertilizers are sold in 2,5kg bags and one bag cost R48,90.

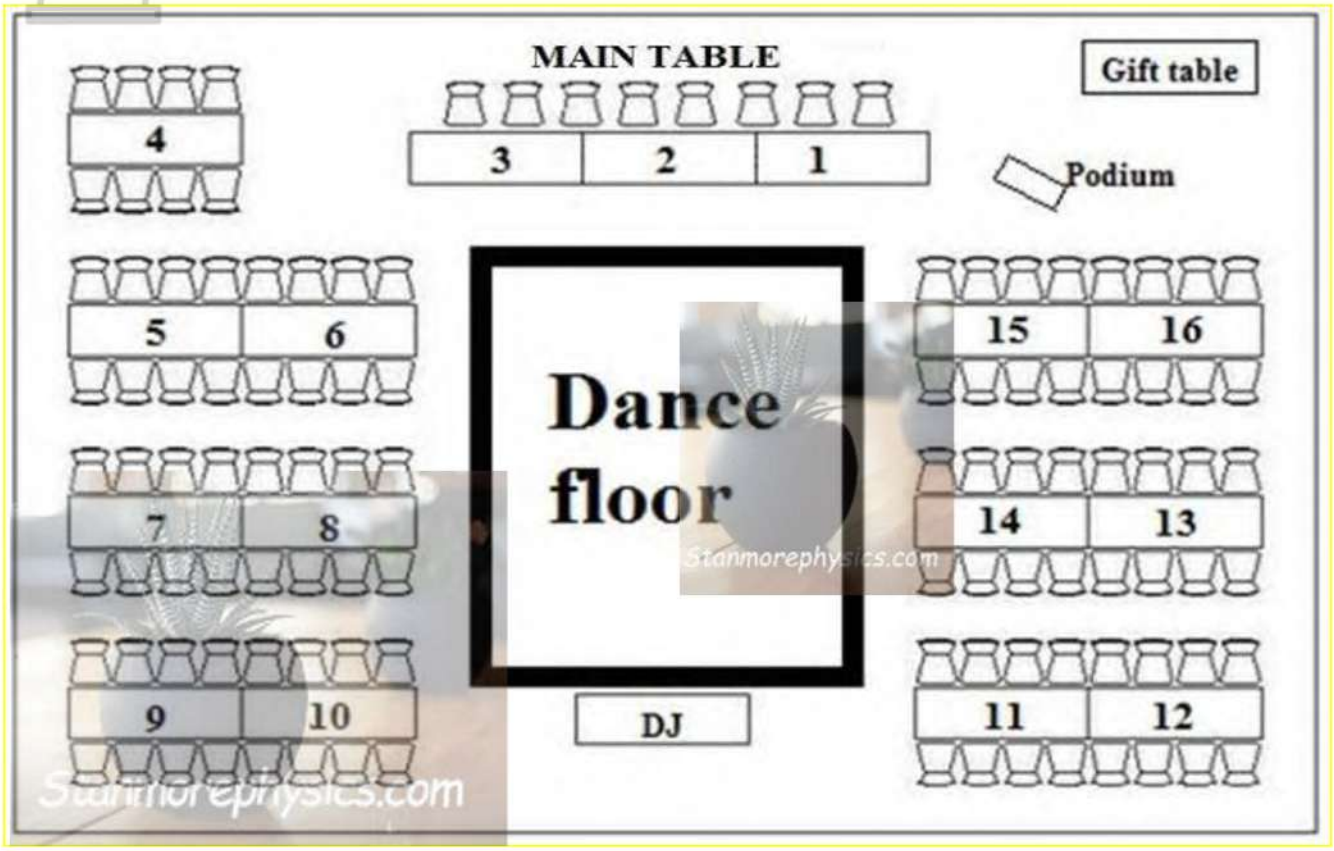
Show, by means of calculations that he will spend R97,80 to buy the fertilizer. (7)

[20]

ANNEXURE A

Question 2.1

Wedding Seating

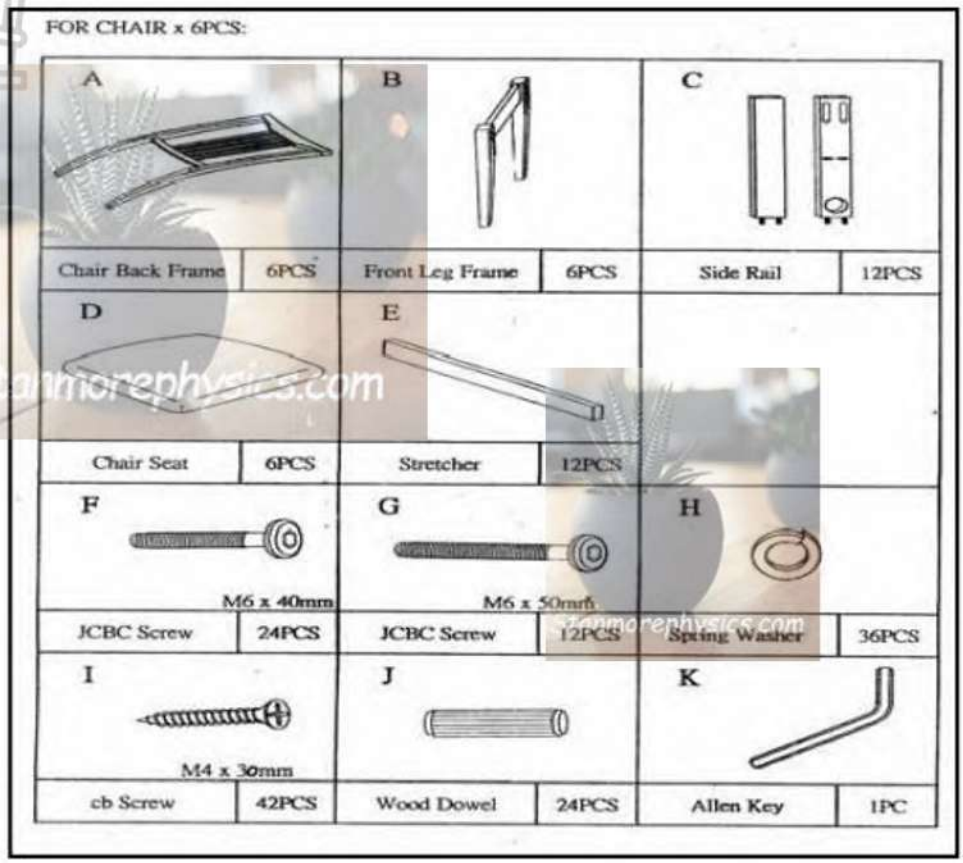


Note: A Podium is a small platform on which a person may stand to be seen by an audience, as when making a speech

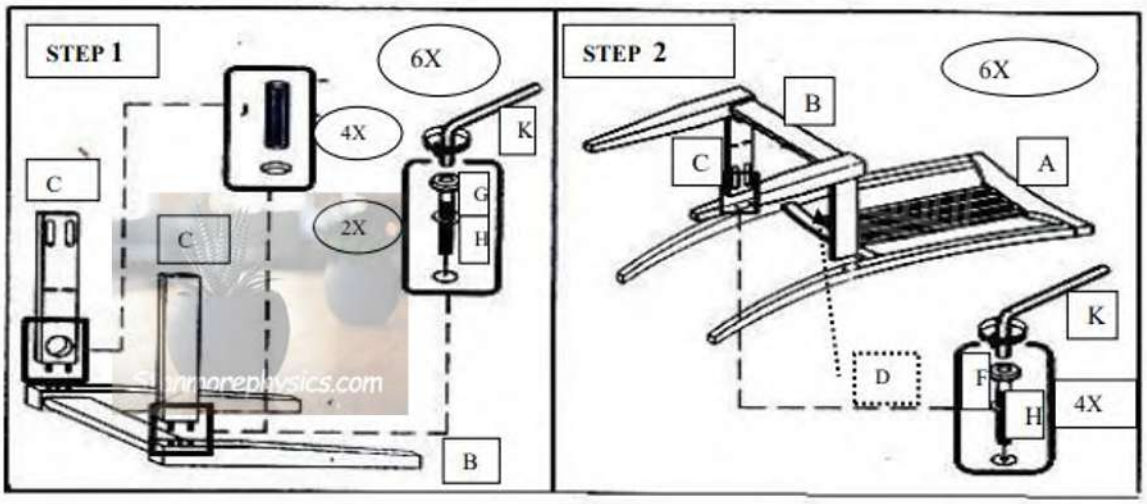
ANNEXURE B

Question 2.2

Parts for Assembling a chair



Steps to follow to assemble the chair



ANNEXURE C

Question 3.2

A Strawberries lemon popsicle recipe

Strawberries lemon popsicles

Ingredients.

3 cups whole strawberries
1 tablespoon fresh lemon juice
1 tablespoon honey
120 ml of tap water

These ingredients serve 8 people.

Preparing time 15 minutes
Freezing time: 5 hours

NOTE: 1 cup = 128 g



A Popsicle is a piece of flavoured ice on a stick, an ice lolly.

Copyright reserved