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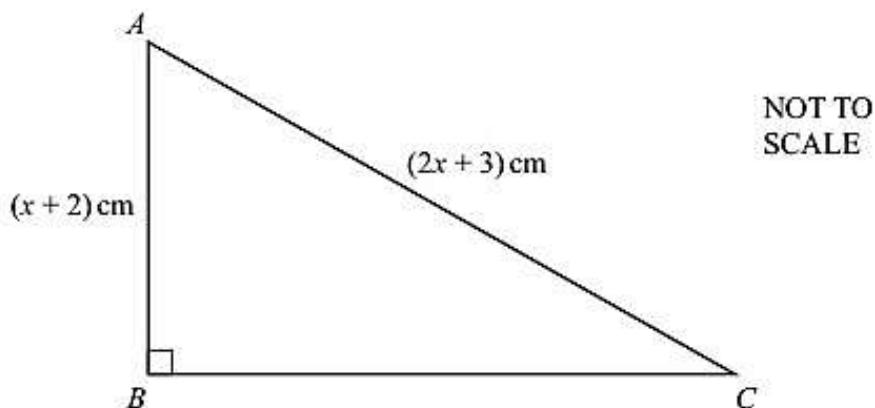
S.S 2 HOLIDAY ASSIGNMENT

***Mid-First Term 2026/2027
Academic Session***

HOLIDAY ASSIGNMENT

MATHEMATICS

1. (a)

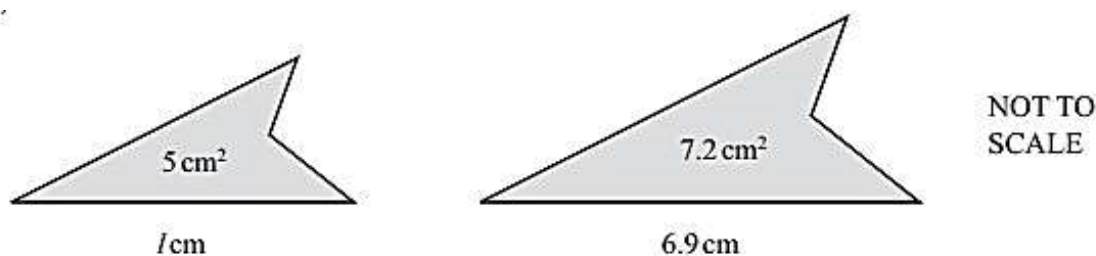


In triangle ABC , $AB = (x + 2) \text{ cm}$ and $AC = (2x + 3) \text{ cm}$.

$$\sin ACB = \frac{9}{16}$$

Find the length of BC .

2.



The diagram shows two similar figures.
The areas of the figures are 5 cm^2 and 7.2 cm^2 .
The lengths of the bases are 1 cm and 6.9 cm .

Calculate the value of l .

ENGLISH LANGUAGE

Read the text below and assess the writer's attitude towards playing a musical instrument. Use three details from Text B to support your answer.

Read **Text B**, and then answer **Question 2(a) and (b)** on the question paper.

Text B: A career in music

This text is about how a young person first became interested in violin playing and how they made a career of it later on.

At 11 years old, I approached my school music department in search of violin lessons. Others were enrolling for the orchestra, so I decided to join. Who wanted to be different? Not me. Realistically, I had no idea what I was getting myself into.

But to my surprise and delight, I found it was fun. Soon I was spending my entire break time

HOLIDAY ASSIGNMENT

in the music room, learning about bowing, fingering and plucking my violin. And I made several lifelong friends. 5

In fact, violin playing began to change my life in a way that was pleasing. Before, I was considered 'below average' and my general school grades were poor. Now, suddenly, music was turning everything the other way around. I was considered successful by classmates and teachers, and I rose to that version of me.

Hearing my violin create awesomeness in the school orchestra also became life-changing. Once, I had no clue what my career was to be. Now I knew I was born to play orchestral music. 10

I wanted to live among those musicians who practised hard to be good at the thing it seemed I was naturally good at: performing. Work would not be work. Work would be satisfying and fulfilling. 15

There was one problem though. According to society, my friends and I were too smart to have careers in music. You see, where I come from, nobody makes a living playing the violin, or with music at all— unless you're a celebrity or something. Even the teachers told us to become doctors or engineers.

My science teacher said, 'Music is not for you: your average point score is too good.' 20

Little did she realise that her attempt to define my future path only made my desire to play my violin with others like me even stronger.

And, yes, after leaving school, my two best friends went to do scientific work, but I joined orchestras. Since then, I have played my violin to audiences who pay me the immediate compliment of—sometimes rapturous— applause, while my friends do their science research behind closed doors, uncertain of when or how their work will be received. 25

They claim to be happy with this, but I would not be able to stand the stress myself. Occasionally we share nostalgic conversations, when they tell me wistfully how they'd love to experience the release, the creative expression and the sheer magic maybe just once again. 30

HISTORY

1. How weak do you think the league was because of its organisation?
2. How successful were the league's attempt at peacekeeping in the 1920s?

CHEMISTRY

- 1a. Define each of the following terms:
Heat of combustion
Heat of neutralization
Write an equation to illustrate each of the terms in 1(a) (i) and (ii) above.
- b. Given that the standard heat of combustion of butane is -5877KJ , calculate the heat of combustion of 14.5g of butane.
2. a. Draw and label an energy profile diagram of an endothermic reaction.

HOLIDAY ASSIGNMENT

- b. Indicate on your diagram the (i) activation; (ii) heat change, ΔH
3. Draw an energy profile diagram to illustrate a catalysed exothermic reaction and label parts of the curve representing the following:
 - (a) activated complex (without catalyst)
 - (b) activation energy (with catalyst)
 - (c) enthalpy change
4. Use an energy profile diagram to illustrate what is meant by the enthalpy change (ΔH) and the activation energy of a reaction.

BUSINESS STUDIES

1. LMB provides healthcare services for people aged 70 years and above. It is a large public sector business which is continuing to grow. The human resources manager has started the recruitment process for 500 additional employees. He is also planning on-the-job training for all LMB's employees. The business uses email as its main method of communication. The human resources manager knows that there are many benefits to a business of having a well-motivated workforce.
 - (a) Define 'public sector business'.
 - (b) Identify two benefits to a business of having a well-motivated workforce.
 - benefit 1
 - benefit 2
 - (c) Identify four stages in the recruitment process.
 - (d) Explain one advantage and one disadvantage to LMB of using on-the-job training.
 - advantage
 - explanation
 - disadvantage
 - explanation
 - (e) Do you think using email is the best method for a business to use to communicate with its employees? Justify your answer.

FINANCIAL ACCOUNTING (Regular & Honour)

1. Refer to Accounting Extract Pack 1, answer the questions on pages 63 - 66 and pages 94 - 96.
2. Read chapter 23 of the Accounting text book and summarize it.

HOLIDAY ASSIGNMENT

ECONOMICS

The factor resources available to an economy will determine its output of economic goods. The relationship between resources and output can be shown on a production possibility curve diagram. Changes in demand, such as the recent rise of vegetarian/vegan diets, alter resource use and create growth opportunities, particularly for smaller suppliers. The price elasticity of demand for various foods is also evolving.

- (a) Define economic good.
- (b) Explain two economic concepts shown by a production possibility curve diagram.
- (c) Analyse why demand for a product may become more price elastic over time.
- (d) Discuss whether or not the growth of a firm is advantageous for both the firm and consumers.

GEOGRAPHY SS 2

- 1.
 - (a) What is plate boundaries?
 - (b) List type of plate boundaries.
 - (c) Draw the diagrams of different types of plate boundaries.
- 2.
 - (a) State the difference between Earthquake and Volcanoe.
 - (b) List ten(10) areas where volcanoe and earthquake has occurred, indicate their magnitude
 - (c) Why do people live in area where earthquake and volcanoe occur and state positive benefits

AGRICULTURAL SCIENCE

- 1. Write short note on two virus diseases and two fungus diseases under the following heading.
 - a. crops affected
 - b. Symptoms
 - c. Prevention and control
- 2.
 - a. What is Hydroponics
 - b. State TWO benefits and 2 problems of hydroponics

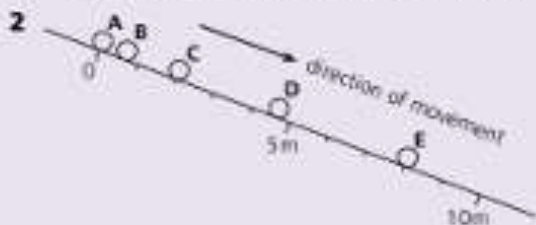
BIOLOGY

- 1. State **FIVE** differences between mitosis and meiosis.

PHYSICS

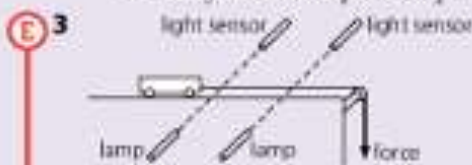
Further questions

- 1 a Write down, **in words**, the equation connecting speed, distance and time. [1]
 b A car travels at a steady speed of 20 m/s. Calculate the distance travelled in 5 s. [2]

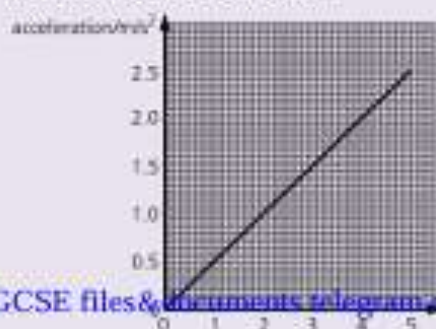


The diagram shows the positions of a ball as it rolled down a track. The ball took 0.5 s to roll from one position to the next. For example, it rolled from A to B in 0.5 s and from B to C in 0.5 s and so on.

- a Write down:
 i the distance travelled by the ball from A to E; [1]
 ii the time taken by the ball to reach E. [1]
 b Calculate the average speed of the ball in rolling from A to E. Write down the formula that you use and show your working. [3]
 c Explain:
 i how you can tell from the diagram that the ball is speeding up; [1]
 ii why the ball speeds up. [1]



A student measures the acceleration of a trolley using the apparatus above. The light sensors are connected to a computer which is programmed to calculate the acceleration. The results obtained are shown on the acceleration-force graph.



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- E
- a i Describe how changing the force affects the acceleration. [2]
 ii Write down, **in words**, the equation connecting force, mass, and acceleration. [1]
 iii Use the data from the graph to calculate the mass of the trolley. [2]
 b Sketch the graph and draw the line that would have been obtained for a trolley of larger mass. [1]

- 4 A car has a mass of 900 kg. It accelerates from rest at a rate of 1.2 m/s^2 .
 a Calculate the time taken to reach a velocity of 30 m/s. [3]
 b Calculate the force required to accelerate the car at a rate of 1.2 m/s^2 . [3]
 c Even with the engine working at full power, the car's acceleration decreases as the car goes faster. Why is this? [3]

- 5 The diagram below shows some of the forces acting on a car of mass 800 kg.



- a State the size of the total drag force when the car is travelling at constant speed. [1]
 b The driving force is increased to 3200 N.
 i Find the resultant force on the car at this instant. [1]
 ii Write down, **in words**, the equation connecting mass, force and acceleration. [1]
 iii Calculate the initial acceleration of the car. [2]
 c Explain why the car will eventually reach a new higher constant speed. [2]



- a Using a scale drawing (for example, on graph paper), find the resultant of the forces above. [3]
 b Draw diagrams to show how, by changing the direction of one of the forces, it is possible to produce a resultant of 17 N. [4]