The Ambassadors College, Ota

GRADE 7 (Honours)

Second Term

Mid – Term Holiday Assignment

HOLIDAY ASSIGNMENT

2025/2026 Academic Session

Name: _____

MATHEMATICS

1.   THE GOAL
To transform flat, 2D "Nets" into perfect 3D solids and investigate how many faces, edges, and vertices appear once the shape is folded.

2.   YOUR MATERIALS
Thick Carton Paper, Marker/Pencil, Scissors and Clear/Transparent Tape or Glue, Ruler and Protractor (Accuracy is vital—1mm off means the shape won't close!).

3.   THE CONSTRUCTION CHALLENGE
You must accurately draw, cut, and fold the Nets for the following four shapes. Each net must include "Folding Tabs" (the extra bits to glue/tape).

SHAPE	NET DESCRIPTION	KEY REQUIREMENT
CUBE	6 identical squares connected in a "cross" shape.	Every side must be exactly 10cm.
SQUARE PYRAMID	1 square base with 4 triangles attached to its sides.	All 4 triangles must be identical. Square base must be exactly 10 cm
CYLINDER	1 large rectangle with 2 circles attached.	The rectangle's length must match the circle's circumference (radius not less than 7cm and height not less than 20cm).
CONE	1 "Pac-Man" wedge (sector) and 1 circle.	The curved edge must wrap perfectly around the base (the slant height not less than 20cm).

4.   QUESTIONS (THIS SECTION IS TO BE TRANSFERRED INTO YOUR NOTEBOOK)
TASK A: THE GEOMETRY

SOLID	SHAPE OF FACES (E.G., SQUARE, CIRCLE)	TOTAL FACES (F)	TOTAL VERTICES (V)	TOTAL EDGES (E)
CUBE				
SQUARE PYRAMID				
CYLINDER				
CONE				

TASK B: CRITICAL THINKING
1.   The Hidden Edges: When your Cube was a flat net, it had 14 outer edges. Once folded, your table says it has 12 edges. Explain where the "missing" 2 edges went.
2.   The Formula Check: For the Cube and Pyramid, calculate**: $F + V - E.$**
3.   Show your working here: _____
4.   The Cylinder Logic: In your own words, explain why a Cylinder is considered to have 2 edges even though it doesn't have any "corners" (vertices).

ENGLISH LANGUAGE

Read the following texts:

1.   Mary Slessor

2.   Diary of Regrets

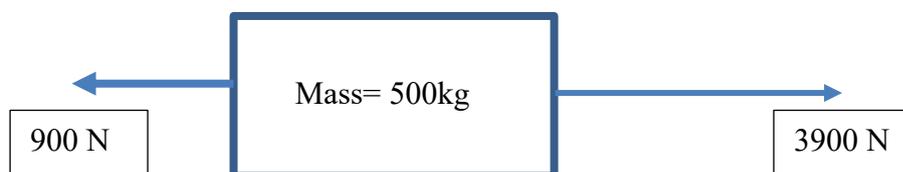From the texts above, set 30 questions each

INTERMEDIATE SCIENCE

BIOLOGY

Cambridge Science Learner's Workbook, page 30-32, Exercise 2.4, question 1-6.

CHEMISTRY

Cambridge science workbook7, page 89-90

PHYSICS

a.   State 3 differences between mass and weight

b.   Calculate the weight of a 50g book.

$$\longleftarrow \boxed{\text{Mass= 500kg}} \longrightarrow$$

$$\boxed{900 \text{ N}} \qquad \boxed{3900 \text{ N}}$$

c.   Calculate the acceleration of the block above

BUSINESS STUDIES

1. a.   What is Digital Technology?

    b.   State and explain any six digital technology devices used in business studies and their uses.

NATIONAL VALUE EDUCATION

1.   Define peaceful living.

2.   Mention five (5) features of peaceful living.

3.   State five (5) importance of peaceful living in our society.