

# ***The Ambassadors College, Ota***

**GRADE 8 (HONOURS)**

**First Term**

**Mid-Term Holiday Assignment**

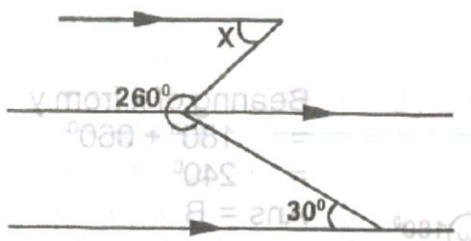
## **HOLIDAY ASSIGNMENT**

**2026/2027 Academic Session**

**Name:** \_\_\_\_\_

## MATHEMATICS

1. Arrange the following numbers in ascending order of magnitude  $\frac{6}{7}$ ,  $\frac{13}{15}$ , 0.865.
2.  $22\frac{1}{2}\%$  of the Nigerian Naira is equal to  $17\frac{1}{10}\%$  of a foreign currency M. what is the conversion rate of the M to the naira?
3. An open rectangular box externally measures  $4\text{cm} \times 3\text{m} \times 4\text{m}$ . Find the total cost of painting the box externally, if it costs ₦2.00 to paint one square metre.
4. A quadrant of a circle of radius 6cm is cut away from each corner of a rectangle 25cm long and 18cm wide. Find the perimeter of the remaining figure.
5. A train travels 60km in Q minutes. If its averages speed is 400km per hour, find the value of Q.
6. Evaluate  $\frac{81^{\frac{3}{4}} - 27^{\frac{1}{3}}}{3 \times 2^3}$
7. Find the value of  $x$  in the diagram.



8. David share ₦207 among his three friends A, B and C in ratio  $\frac{1}{6} : \frac{1}{4} : \frac{1}{3}$
9. The ratio of green balls to yellow balls in a bag is 3 : 7. When 9 balls of each colour are removed, the ratio of green balls to yellow balls becomes 1 : 3. How many balls were originally in the bag?
10. A man is standing on top of a cliff 50m high. The base of the cliff is in line with two Buoys on the horizontal ground whose angles of depressions are  $30^\circ$  and  $55^\circ$  respectively. Using a Scale of 1cm to 6.25m, find the actual distance between the two Buoys, correct to the nearest metre.

### ENGLISH LANGUAGE

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As a participant in a debate competition in your school, you are to **oppose** the motion which states: 21st century teenagers are obsessed with image and fashion. Write an essay of about 250 words to deliver your argument.

### INTERMEDIATE SCIENCE

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#### **BIOLOGY**

Cambridge Lower Secondary Science Workbook 8 by Mary Jones et al, pages 16 & 17, Exercises 1.5A & 1.5B.

#### **CHEMISTRY**

CAMBRIDGE SCIENCE LEARNER'S BOOK PG 66 EXERCISE 2.1 and 2.2

#### **PHYSICS**

Question 1:

A construction crane lifts a load of bricks with a mass of 150 kg from the ground to the top of a building. The building is 20 m tall. The crane takes 40 seconds to lift the load at a constant speed. (Take gravitational field strength  $g = 10 \text{ N/kg}$ )

- (a) State the formula for calculating work done.
- (b) Calculate the weight of the load of bricks.
- (c) Calculate the work done by the crane in lifting the load to the top of the building.
- (d) Calculate the power developed by the crane.
- (e) The crane is then used to lift a heavier load of 300 kg. State and explain what happens to the power developed by the crane if it takes the same amount of time to lift the load to the same height.

## Mid – Term Holiday Assignment

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### Question 2:

A roller coaster car of mass 500 kg is at the top of a hill, 30 m above the ground. It is released from rest and rolls down the track. Assume there is no friction or air resistance. (Take  $g = 10 \text{ N/kg}$ )

- (a) State the principle of conservation of energy.
- (b) Calculate the gravitational potential energy (GPE) of the car at the top of the hill.
- (c) Calculate the kinetic energy (KE) of the car at the bottom of the hill.
- (d) Calculate the speed of the car at the bottom of the hill.
- (e) In reality, there is friction on the track. State and explain what effect this would have on the speed of the car at the bottom of the hill.
- (f) The car at the bottom of the hill now travels along a flat section of track and comes to a stop in 10 seconds. Calculate the average power dissipated.

## BUSINESS STUDIES

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- 1. Define a petty cash book.
- 2. State four reasons for keeping a petty cash book.
- 3. Differentiate between goals and objectives.

## SOCIAL & CITIZENSHIP STUDIES

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- 1.
  - a. Define government
  - b. Identify (3) main arms of government and state the primary functions of each arm.