# HIGHWAY COLLEGE

Name: _____ Grade: 6
Subject: Mathematics
Project
Examiner: Miss T Boulton Due Date: 15 August 2024

| Content Area | Topics |
|---|---|
| Numbers, Operations and Relationships | Whole numbers (Addition, Multiplication, Division, Ratio)<br>Common Fractions<br>Decimal Fractions |
| Patterns Function and Algebra | Numeric Patterns |
| Space and shapes | Properties of 2D shapes<br>Symmetry<br>Properties of 3D objects |

**Instructions to learners:**

1. Read all instructions carefully.
2. Answer Questions the spaces or frames provided.
3. Show all working (where necessary).
4. The use of calculators is not allowed.
5. Write neatly and legibly.

**PROBLEM STATEMENT:**

Your school is going to have breakfast in the nutrition programme menu for your class. Your class is given the responsibility to determine the total number of boxes of cereals as well as the total cost of boxes of cereals to be bought each month. To do this you need to find out how many boxes of cereals will be needed per day in your class. You will have to write up the report to inform the principal as to how much boxes of cereals should be ordered for a month and their cost. Assume 40 leaners will eat cereals each day.

## ACTIVITY 1 [9]

**In your research you find out that 8 boxes of cereal will be eaten by learners per day. Each box costs R75,50. Answer the questions that follow:**

1.1 How much will 8 boxes of cereals cost? (2)

_____
_____

1.2 How many boxes of cereals will be needed for a month (school days only). (2)

_____
_____

1.3 What will be the total cost of boxes of cereals needed for a month? (2)

_____
_____
_____

1.4 If 40 learners eat 8 boxes of cereals each day:

1.4.1 How many learners will share one box of cereals. (1)

_____
_____

1.4.2 What fraction will each learner get? Write the fraction in the simplest form. (1)

_____
_____

1.4.3 What will be the ratio of 8 boxes to 40 learners? Write the ratio in the simplest form. (1)

_____
_____

## ACTIVITY 2 [3]

**The table below shows number of boxes of cereals eaten by learners in your class in different days.**

2.1 Complete the table below: (2)

| Number of days | 1 | 2 | 3 | 5 | 10 |
|---|---|---|---|---|---|
| Number of cereal boxes | 8 | 16 | 24 | | |

2.2 Describe the rule of the pattern above in your own words. (1)

_____

## ACTIVITY 3 [11]

**Consider this as the cereal box (Figure 1) you school will buy for your class and its diagrammatically representation (Figure 2) below:**




**Figure 1**

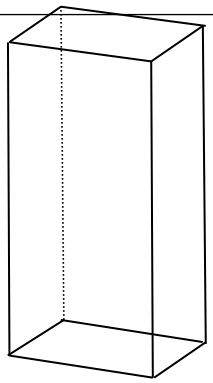


**Figure 2**

3.1 Cut out the nets from the cereal box (3-D object) that is given and then draw the net of the object above. (1)

3.2 Name the 3-D object which the cereal box represents. (1)

_____

3.3 How many faces does the object have? ? (1)

_____

3.4 How many edges does the object have? (1)

_____

3.5 How many vertices does the object have? (1)

_____

3.6 How many pairs of opposite faces does it have? (1)

_____

3.7 Name the types of polygons which the faces represent? (1)

_____

3.8 How many lines of symmetry does each face have? (1)

_____

3.9 How many angles does each face have? (1)

_____

3.10 What types of angles does the faces have? (1)

_____

3.11 What is the size of each angle? (1)

_____

**ACTIVITY 4** **[2]**

4.1 Write a report to the school principal in which you inform him how many boxes of cereals must be purchased in each month and the total cost to serve 40 learners. (2)

_____
_____
_____
_____
_____

**TOTAL = 25 MARKS**