TIME: 2 HOURS MARKS: 50
NO READING TIME.

INSTRUCTIONS TO CANDIDATES
1. Pull out the Answer Sheet from the question paper.

2. Write your name, examination number and school/centre on the Answer Sheet.
   This paper consists of Sections A and B only. There are thirty (30) questions in this paper.
   Section A: Answer all questions. Write down the letter of the answer by marking a cross (X) on the Answer Sheet provided.
   Section B: Answer all questions. Write down the answers in the spaces provided on the Answer Sheet.

Note: No paper for rough work is to be provided. Any working should be done on the question paper in the spaces provided.

1. Cell phones and calculators are not allowed in the examination room.

2. Only the Answer Sheet should be handed in.

goto zedpastpapers.com for more
SECTION A [10 MARKS]

1. Evaluate $15 - (19 + 7)$
   A. 11
   B. 3
   C. -3
   D. -11
   E. -27

2. Find the Lowest Common Multiple (L.C.M) of 8, 12 and 16.
   A. 24
   B. 32
   C. 48
   D. 64
   E. 96

3. Arrange the following fractions in their descending order.
   \[
   \frac{3}{5}, \frac{7}{12}, \frac{8}{15}, \frac{5}{7}, \frac{5}{8}, \frac{12}{5}, \frac{7}{5}, \frac{7}{8}, \frac{12}{8}, \frac{12}{5}
   \]
   A. \[
   \frac{3}{5}, \frac{7}{12}, \frac{8}{15}, \frac{5}{7}, \frac{5}{8}, \frac{12}{5}, \frac{7}{5}, \frac{7}{8}, \frac{12}{8}, \frac{12}{5}
   \]
   B. \[
   \frac{3}{5}, \frac{7}{12}, \frac{8}{15}, \frac{5}{7}, \frac{5}{8}, \frac{12}{5}, \frac{7}{5}, \frac{7}{8}, \frac{12}{8}, \frac{12}{5}
   \]
   C. \[
   \frac{3}{5}, \frac{7}{12}, \frac{8}{15}, \frac{5}{7}, \frac{5}{8}, \frac{12}{5}, \frac{7}{5}, \frac{7}{8}, \frac{12}{8}, \frac{12}{5}
   \]
   D. \[
   \frac{3}{5}, \frac{7}{12}, \frac{8}{15}, \frac{5}{7}, \frac{5}{8}, \frac{12}{5}, \frac{7}{5}, \frac{7}{8}, \frac{12}{8}, \frac{12}{5}
   \]
   E. \[
   \frac{3}{5}, \frac{7}{12}, \frac{8}{15}, \frac{5}{7}, \frac{5}{8}, \frac{12}{5}, \frac{7}{5}, \frac{7}{8}, \frac{12}{8}, \frac{12}{5}
   \]

4. How many subsets are in set P, if $P = \{1, 2, 3\}$?
   A. 3
   B. 4
   C. 6
   D. 8
   E. 9

5. A mathematics lesson which lasted for 40 minutes ended at 09 35 hours. When did the lesson begin?
   A. 08 45 hours
   B. 08 50 hours
   C. 08 55 hours
   D. 10 15 hours
   E. 10 55 hours

Goto zedpastpapers.com for more
6 In the diagram below, EF is parallel to AC. Angle BCD = 130°, angle AEF = 100°.

Calculate angle ABC
A 40°
B 50°
C 55°
D 80°
E 130°

7 Given that 31 ≤ p ≤ 40, such that p is a prime number, find the sum of the prime numbers.
A 66
B 68
C 70
D 76
E 175

8 Find the next two numbers in the sequence 48, 43, 36, 27...
A 13, 3
B 14, 4
C 16, 3
D 16, 4
E 18, 1

9 The Pie chart shows the ages of pupils of Zimizi Open School.
Given that the school has 200 pupils who are over 18 years of age, find the total number of pupils at this school.

A 222  
B 414  
C 660  
D 1000  
E 1200

10 The triangle below has a perimeter of 16 cm.

\[ \begin{array}{c}
A \\
\text{xcm} \\
\text{xcm} \\
B \\
2\text{xcm} \\
C \\
\end{array} \]

Find the value of x.

A 64  
B 48  
C 32  
D 16  
E 4

SECTION B [40 MARKS]

11 Express as a single fraction:
\[ \frac{x-4}{4} - \frac{x-6}{6} \]

12 Evaluate 0.036 + 0.00012, expressing your answer in standard form.

13 In the diagram below, the bearing of P from Q is 157°.

\[ \begin{array}{c}
N \\
157° \\
\text{Q} \\
\end{array} \]

Find the bearing of Q from P
14 In the rectangle below, \(AB = (x + 5)\) cm and \(BC = 3\) cm.

\[
\begin{align*}
A & \quad (x + 5)\text{cm} \\
D & \quad 3\text{cm} \\
C & \\
B & \\
\end{align*}
\]

Find the value of \(x\), if the area of the rectangle is 33\(\text{cm}^2\).

15 Convert \(110111_\text{two}\) to base 10.

16 Factorise completely \(16x - 32xy\).

17 Solve the equation \(3y + 4 = 7y - 20\).

18 Evaluate \(\frac{5}{y} - \frac{2}{3} \div 3\).

19 The diagram below shows set \(A, B\) and \(C\).

\[\text{Diagram showing set intersections A, B, and C.}\]

(i) Find \(n(A \cap C)\)

(ii) List the set \((A \cap B) \cup C\)

20 A man spends 7% of his monthly income on paying rent for his house. If he pays K350 000 per month as rent, calculate his monthly income.

21 A train travelling between two islands crosses a bridge in 10 minutes. If it was travelling at an average speed of 54 Km/h, find the length of the bridge.

goto zedpastpapers.com for more
22 A father shares K2 100 000 between his two children for their school requirements in the ratio 5:2. If the older child gets the bigger share, how much did he get?

23 On the map, two villages, Mapopo and Chibamu are 4cm apart. Calculate the actual distance between the two villages, given that the scale is 1 cm to 2.5 km.

24 A Savings Bank offers an interest of 1 ¼ % per annum. Find how much money Mr. Naza should deposit into the bank for him to receive an interest of K50 000 in a year.

25 Given that \( h = a + rt \), make \( r \) the subject of the formula.

26 The diagram below shows town A, 18km North of town B and town C, 12km East of town B.

\[ \text{Find the shortest distance between town A and town C.} \]

27 Solve the simultaneous equations:
\[ 2x - y = 3 \quad \text{and} \quad y = x + 1. \]

28 The line \( 3x + 2y = 9 \) passes through the point \((5, b)\). Find the value of \( b \).
29. The diagram below shows a rectangle and a semi-circle. The rectangle has sides 5 cm by 14 cm.

Taking \( \pi \) to be \( \frac{22}{7} \), calculate the perimeter of the figure.

30. List the values of \( x \) given that \( 2x + 9 \geq 10x - 15 \), where \( x \) is a natural number.