MARKING SCHEME
MATHEMATICS
FORM 1 TERM 1

INSTRUCTIONS: *Answer all questions in the spaces provided*

Calculators should not be used

1. Express the following numbers in words:-
   (a) 74 379 652 137   (2 marks)
      Seventy four billion three hundred and seventy nine million six hundred and fifty two thousand one hundred and thirty seven.

   (b) 3 486 789   (2 marks)

      Three million four hundred and eighty six thousand seven hundred and eighty nine

2. Round off the following numbers to the nearest number indicated in bracket   (4 marks)
   (a) 379(10) = *380*

   (b) 89 365(100) = *89,400.*

   (c) 249 889(1000)= *25,000.*

   (d) 89 123 564(1 000 000)= *89,000,000*

3. Three cisterns in a public lavatory are designed to flush at at intervals 0f 8, 13 , 15 seconds. After how many minutes will they flush together again?

2	8	13	15
2	4	13	15
2	2	13	15
3	1	13	15	√
5	1	13	5
13	1	13	1
	1	1	1

   LCM = 2 x 2 x 2 x 3 x 5 x 13 = 1560 sec √

$\frac{1560}{60}$ = 26 minutes √

4. Evaluate 96 ÷ 6 + 7 x 15 – 14 x 5   (3 marks)

   Bodmas

   =16 + 7 x 15 – 14 x 5

   = 16 + 105 – 70

   =121 – 70 = 51

5. A vegetable vendor had 1348 cabbages. He sold 750 on the first day and 240 on the second day. He added 462 to the remaining stock on the third day.
   (a) How many cabbages did he have at the end?   (2 marks)

   1348 – (750 + 240) + 462

   = 820

   (b) If he sold all the cabbages at an average price of sh. 12 each, how much money did he collect?   (2marks)

   1348 + 462 =1810
   *   1810 x 12 = sh. 21,720*

6. Express the following composite numbers as a product of prime factors   (3 marks)
   (a) 81 = 3 x 3 x 3 x 3

   (b) 1386 = 2 x 3 x 3 x 7 x 11

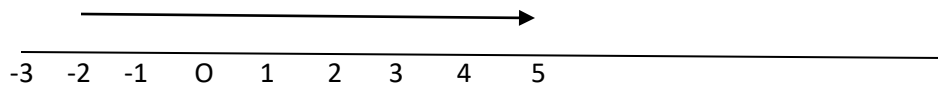   (c) 2057 = 11 x 11 x 17

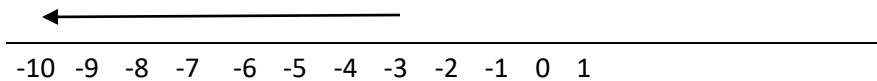7. The GCD of two numbers is 12 and the LCM is 240. If one of the numbers is 60, find the other number. (2 mks)

Number = $\frac{GCD \ X \ LCM}{NUMBER \ GIVEN} = \frac{240 \ X \ 12}{60} = 48$

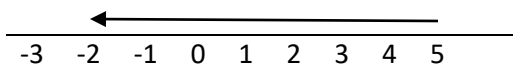8. Perform bthe following operations using number line (6 marks)

a) +5 - (-2) = 7

$$
\begin{array}{ccccccccc}
-3 & -2 & -1 & O & 1 & 2 & 3 & 4 & 5
\end{array}
$$

b) -10 – (-3) = -7

$$
\begin{array}{ccccccccccc}
-10 & -9 & -8 & -7 & -6 & -5 & -4 & -3 & -2 & -1 & 0 & 1
\end{array}
$$

c) (-2) – (+5)= -7

$$
\begin{array}{ccccccccc}
-3 & -2 & -1 & 0 & 1 & 2 & 3 & 4 & 5
\end{array}
$$

9. Using divisibility test find out whether the the following numbers are divisible by the number in bracket
   (a) 104 844 (11) (2 marks)

   (1 + 4 + 4) – (0 + 8 + 4) = -3   NOT DIVISIBLE BY 11

   (b) 84 735(9) (2 mks)

   8 + 4 + 7 + 3 + 5 = 27   DIVISIBLE BY 9

(c) 48 732(6) (2 mks)

Ends with 2 – divisible by 2
4+8+7+3+2 = 24 divisible by 3 THEREFORE ITS DIVISIBLE BY 6

10. Work out without using a calculator

a) 98 + 6734 + 348 (2 marks)

$$
\begin{array}{r}
98 \\
+ 6734 \\
348 \\
\hline
7180
\end{array}
$$

(3 marks)

b) $\frac{648-243}{81} =$

$$
\begin{array}{r}
648 \\
- 243 \\
\hline
405
\end{array}
$$

$$
\begin{array}{r}
5 \\
81 \overline{\smash{)}405} \\
405 \\
\hline
\end{array}
$$ =5

11. What is the greatest mass that can be taken in exact number of times from 144g, 216g, 126g. (3marks)

$$
\begin{array}{c|ccc}
2 & 144 & 216 & 126 \\
3 & 72 & 108 & 63 \\
3 & 24 & 36 & 21 \\
& 8 & 12 & 7
\end{array}
$$

GCD = 2 x 3 x 3 = 12g

12. A man was born in 1966. His father was born in 1928 and the mother 3 years later. If the mans daughter was born in 1992 and the son 5 years earlier, find the difference between the age of the mans mother and that of the son. (3 marks)

Father 1966

Mother 1928 + 3 = 1931

Daughter 1992

Son 1992 – 5 = 1987

Age difference between mother and son = 1987 – 1931 = 56 years

13. If x= -2, y= -6 and z= 4 find the value of

    a)   2y – 3x + z   (2 marks)

        = 2(-6) – 3(-2) + 4

         = -12 + 6 + 4

         = -2

    b) $\frac{3yz}{x}$ =   (2 marks)

      $\frac{3\,x-6\,x\,4}{-2}$ = 36