

NAME.....CLASS.....ADM.....

**MATHEMATICS FORM 1**

**INSTRUCTIONS: - Answer all questions in the spaces provided.**

1. Without using a calculator, evaluate  $\frac{-8 + (-5) \times (-8) - (-6)}{-3 + (-8) \div 2 \times 4}$  ( 3 marks)

2. Three bells ring at intervals of 9 minutes, 15 minutes and 21 minutes. If the bells last rang together at 11.00 a.m. Find the time the bells will next ring together. ( 3marks)

3. Evaluate  $\frac{1}{3}$  of  $\left(2\frac{3}{4} - 5\frac{1}{2}\right) \times 3\frac{6}{7} \div \frac{9}{4}$  ( 3 marks)

4. Evaluate  $\frac{13.5 \times 1.7}{1.53 \times 0.35}$  ( 3 marks)

5. The average mass of students in a class of 45 was 41 at the beginning of the term. At the end of the term, they had each gained 3 kg. Calculate:-

a) Their total mass at the end of the term. ( 2marks)

b) The difference between their total masses at the start and at the end of term. ( 2 marks)

6. Convert each of the following into a fraction

a) 0.375 (2 marks)

b) 2.275 (2marks)

c)  $3.\dot{6}\dot{7}$  (2 marks)

7. Simplify  $\frac{ax-ay+bx-by}{a+b}$  ( 3 marks)

8. Tete withdrew some money from a bank. He spent  $\frac{3}{8}$  of the money to pay Achol's school fees and  $\frac{2}{5}$  to pay Tatu's school fees. If she remained with Kshs. 12,330, calculate the amount of money he paid for Tatu's school fees. (3 marks)

9. Find the length of a square whose area is  $0.0084 \text{ m}^2$  (2 marks)

10. What is the place value and the total value of each of the digits underlined below  
a) 3 486 789 (2 marks)

- b) 98 374 803 041 (2 marks)

11. Express the following composite numbers as a product of prime factors  
a) 5929 (2marks)

b) 1573

(2 marks)

c) 1386

(2 marks)

12. Test whether 1 108 809 is divisible by

a) 4

(2 marks)

b) 9

(2 marks)

13. The G.C.D. of three numbers is 30 and their L.C.M. is 900. Two of the numbers are 150 and 60.  
What are the other two possible numbers? ( 3 marks )

14. Perform the following operations using numberline

( 6 marks)

a)  $-7 - (-8) =$

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b)  $+11 - (-4) =$

c)  $-6 - (+6) =$

15. Five companies employed 2340, 3455, 675, 960 and 1350 workers. The first two companies laid off 1 worker for every 5 while the other three recruited 2 new workers for every 3.

a) What was the total number of workers at the beginning? (2 marks)

b) How many people

i) Lost their jobs (2 marks)

ii) Got jobs (2 marks)

c) What was the total number of workers finally? (2 marks)

16. Express each of the following as a single fraction in its simplest form

a)  $\frac{x+y}{3} - \frac{2x-y}{2}$  (2 marks)

b)  $\frac{1}{x+1} - \frac{1}{x-1}$

( 2 marks)

17. Use tables to evaluate

a)  $0.706^2$

( 2marks)

b)  $23.5^2 + 0.701^2$

( 3 marks)

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