

JSS 1 MATHEMATICS

FIRST TERM TEST

Student's Name: _____

Date: _____

Class: JSS 1

Time Allowed: 1 Hour

Scope: Weeks 1-6

Total Marks: 30

INSTRUCTIONS

1. Answer all 20 questions in Section A.
2. Answer THREE questions only in Section B.
3. Each objective question carries 1 mark. Each essay question carries 3 marks. One bonus mark is available for the best overall work.
4. Show your workings where necessary.

SECTION A: OBJECTIVE QUESTIONS (20 MARKS)

Choose the correct answer from options A-D.

1. Which of the following is a whole number?
A. -3 B. $\frac{1}{2}$ C. 0 D. 2.5
2. What is the place value of 5 in 5,432?
A. 5 B. 50 C. 500 D. 5,000
3. Arrange the following numbers in ascending order: 45, 12, 78, 23.
A. 78, 45, 23, 12 B. 12, 23, 45, 78
C. 23, 12, 45, 78 D. 12, 45, 23, 78
4. What is the value of the digit 7 in 3,745,000,000?
A. 7 million B. 70 million C. 700 million D. 7 billion
5. Which of the following is a multiple of 4?
A. 6 B. 10 C. 12 D. 15
6. What is the LCM of 3 and 4?
A. 7 B. 12 C. 8 D. 1
7. The first three positive multiples of 5 are _____.
A. 1, 2, 3 B. 5, 10, 15 C. 5, 15, 25 D. 10, 15, 20
8. Which of the following is a factor of 12?
A. 5 B. 7 C. 8 D. 4
9. Find the HCF of 8 and 12.
A. 2 B. 4 C. 6 D. 8
10. The highest common factor of two or more numbers is the _____ common factor.
A. smallest B. largest C. first D. last
11. Which digits are used in the binary number system?
A. 0 and 1 B. 1 and 2 C. 0 to 9 D. 2 and 3
12. What is the LCM of 5 and 10?
A. 5 B. 10 C. 15 D. 50
13. Which number is divisible by both 2 and 3?
A. 7 B. 10 C. 12 D. 25
14. What is the value of 101 in base 2, expressed in base 10?
A. 3 B. 4 C. 5 D. 6

15. Which represents decimal 6 in base 2?
A. 101 B. 110 C. 111 D. 100
16. To convert a base-ten number to base two using repeated division, divide by _____.
A. 5 B. 10 C. 2 D. 3
17. Convert 5 in base 10 to base 2.
A. 100 B. 101 C. 110 D. 111
18. Convert 8 in base 10 to base 2.
A. 1000 B. 1010 C. 1100 D. 1110
19. What is the remainder when 13 is divided by 2?
A. 0 B. 1 C. 2 D. 3
20. When converting a decimal number to binary by repeated division, read the remainders from _____.
A. top to bottom B. left to right C. bottom to top D. right to left

SECTION B: ESSAY QUESTIONS - ANSWER THREE ONLY

Each question carries 3 marks. One bonus mark is available for the best overall work.

Question 1: Whole Numbers

- b. Write the place value of each digit in 4,572. (1 1/2 marks)
- c. Arrange 35, 12, 48, 21 in ascending order. (1 1/2 marks)

Question 2: LCM

- b. List the first four positive multiples of 3. (1 mark)
- c. Find the LCM of 4 and 6 using the listing method. (2 marks)

Question 3: HCF

- b. List all the factors of 12. (1 1/2 marks)
- c. Find the HCF of 8 and 12. (1 1/2 marks)

Question 4: Counting in Billions and Trillions

- a. Write seven billion, two hundred million in figures. (1 1/2 marks)
- b. Write three trillion, five billion in figures. (1 1/2 marks)

Question 5: Conversion from Base Ten to Base Two

- a. Convert 6 in base 10 to base 2. Show your workings. (1 1/2 marks)
- b. Convert 9 in base 10 to base 2. Show your workings. (1 1/2 marks)