MATHEMATICS ASSIGNMENT

JSS 2 | Nigerian Curriculum

Topics: Highest Common Factor (HCF), Lowest Common Multiple (LCM), HCF and LCM combined, and Fractions

Student's Name: _____ Date: _____

Instructions

- Answer all questions. Show your working clearly.
- Use prime factorisation or listing of factors/multiples where appropriate.
- Give fraction answers in their simplest form.
- Do not use a calculator unless your teacher permits it.

Section A: HCF and LCM

1. Find the HCF of 24 and 36.

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2. Find the LCM of 15 and 20.

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3. Find the HCF of 42, 56 and 70.

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4. Find the LCM of 8, 12 and 18.

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5. Express 60 and 84 as products of prime factors. Hence, find their HCF and LCM.

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Section B: HCF and LCM in Word Problems

6. A teacher has 48 pencils and 60 erasers. She wants to make identical gift packs with no items left over. What is the greatest number of packs she can make? How many pencils and erasers will be in each pack?

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7. Three bells ring at intervals of 6 minutes, 8 minutes and 12 minutes. If they ring together at 9:00 a.m., at what time will they next ring together?

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8. Two ribbons are 72 cm and 90 cm long. They are cut into pieces of equal length, with no ribbon left over. What is the greatest possible length of each piece? How many pieces will be obtained altogether?

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LIVEWORKSHEETS

9. A bus arrives at a station every 15 minutes and another bus every 25 minutes. If both arrive at 10:15 a.m., when will they next arrive together?

Section C: Fractions

10. Simplify: 18/24.

11. Simplify: 35/49.

12. Arrange these fractions in ascending order: 2/3, 3/4, 5/6.

13. Calculate: 3/8 + 1/4.

14. Calculate: 7/9 − 2/3.

15. Calculate: 5/6 × 3/10. Give your answer in its simplest form.

16. Calculate: 4/5 ÷ 2/3.

17. Convert 2 3/5 to an improper fraction.

18. Convert 17/4 to a mixed number.

19. A student reads 3/8 of a book on Monday and 1/4 of the book on Tuesday. What fraction of the book has the student read altogether? What fraction remains?

Section D: Mixed Challenge — HCF, LCM and Fractions

20. Find the HCF and LCM of 18 and 30. Verify that HCF × LCM = 18 × 30.

21. Find the HCF of 3/4 and 9/10 by first expressing the fractions with a common denominator, then using the HCF of the numerators.

22. Find the LCM of 2/3 and 5/6 by using the LCM of the numerators and the HCF of the denominators.

LIVEWORKSHEETS

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23. A baker has 2 1/4 kg of flour. She uses 3/8 kg for each batch of buns. How many full batches can she make, and how much flour will remain?

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24. A rectangular garden is 3/4 m wide and 5/6 m long. Find its area in square metres. Simplify your answer.

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25. A class has 24 boys and 36 girls. The teacher wants to divide them into the greatest possible number of equal groups, with the same number of boys and the same number of girls in each group. Find: (a) the greatest number of groups, (b) boys in each group, and (c) girls in each group.

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Check your work before submitting. Show steps—not just answers.

LIVEWORKSHEETS