St. Andrews Scots Sr. Sec. School

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Session:2026-27

Worksheet

Class: X	Subject: Mathematics	Topic: Real Number	Worksheet 1

1. The HCF of 60 and 108 is 12. Write their LCM.

2. Express 102 as a product of its primes.

3. Can two numbers have 16 as their HCF and 380 as their LCM? Give reason.

4. State the Fundamental Theorem of Arithmetic.

5. Write a rational number between √5 and 3.

6. What is the HCF of the smallest composite number and the smallest prime number?

7. Explain why 5 × 4 × 3 × 2 × 1 + 3 × 2 is a composite number.

8. Find the smallest number which leaves remainders 8 and 12 when divided by 28 and 32 respectively.

9. Prove that (2+√3) is an irrational number.

10. Prove that √5 is irrational.

11. Find the smallest number which when increased by 17 is exactly divisible by both 520 and 468.

12. What is the smallest number that, when divided by 35, 56 and 91 leaves a remainder 7 in each case?

13. On a morning walk, three persons step off together; their steps measure 75cm, 82cm and 90cm respectively. What is the minimum distance each should walk so that all can cover the same distance in complete steps?

14. Find the greatest number of 6 digits exactly divisible by 24, 15 and 36.

15. Two tankers contain 850 litres and 680 litres of petrol respectively. Find the maximum capacity of a container which can measure the petrol of either tanker in exact number of times.

16. Three sets of Science, English and Mathematics books have to be stacked in such a way

that all the books are stored topic wise and height of each stack is the same. The number of science books is 84, the number of English books is 210 and the number of Mathematics books is 350. Assuming that the books are of same thickness, determine the number of stacks of Science, English and Mathematics book.

17. Show that 12^n cannot end with the digit 0 or 5 for any natural number n.

18. Prove that (√3 + √5) is irrational.

19. Find the least number of square tiles required to pave the ceiling of a room 15m17cm long 9m2cm broad.

20. In a school, there are two sections, namely A and B of class X. There are 30 students in section A and 28 students in section B. Find the minimum number of books required for their class library so that they can be distributed equally among students of section A or section B.

21. If HCF of 210 and 55 is expressible in the form of 210 × 5 + 55y , then find y.

ANSWERS

1. 540

2. 2×3×17

3. No

8. 204

11. 4663

12. 3647

13.184 m 50 cm

14. 999720

15. 170 l

16. 6, 15, 25

19. 814 tiles

20. 420 books

21. y = - 19

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