CBSE CLASS X

Mathematics Standard (041)

QUESTION PAPER

From previous CBSE Board Exam questions

Code: MLAJRZ	Questions: 70	Maximum Marks: 120	Generated: 2026-06-15 12:52

SELECTIONS USED

Source	Previous-year board
Subject	Mathematics
Lessons	Real Numbers
Year	2022-2026
Questions selected	70

Composition — Types: 33 MCQ · 16 Short · 15 Very short · 6 Assertion–reason · 1 Case-based

Q1. § 1.1 Introduction **[2]**

Find the greatest number which divides 85 and 72 leaving remainders 1 and 2 respectively.

Previously asked in: 2023 30/1/1 Q24

◆ **Real Numbers** HCF / Euclid's Division Lemma – Greatest number leaving given remainders

Q2. § 1.2 The Fundamental Theorem of Arithmetic **[1]**

Which of the following cannot be the unit digit of 8^n, where n is a natural number ?

A 4
B 2
C 0
D 6

Previously asked in: 2025 30/6/1 Q2

◆ **Real Numbers** Cyclicity of Unit Digits of Powers of Natural Numbers

Q3. § 1.4 Summary **[1]**

For any prime number p, if p divides a^2, where a is any real number then p also divides

A a
B $a^{\frac{1}{2}}$
C $a^{\frac{3}{2}}$
D $a^{\frac{1}{8}}$

Previously asked in: 2025 30/5/1 Q3

◆ **Real Numbers** 1.2 The Fundamental Theorem of Arithmetic

Q4. § 1.3 Revisiting Irrational Numbers § 1.4 Summary **[1]**

In question number 19 and 20, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.

Assertion (A): 4^n ends with digit 0 for some natural number n.
Reason (R): For a number 'x' having 2 and 5 as its prime factors, x^n always ends with digit 0 for every natural number n.

(a) Both, Assertion (A) and Reason (R) are true and Reason (R) is correct explanation of Assertion (A).
(b) Both, Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
(c) Assertion (A) is true but Reason (R) is false.
(d) Assertion (A) is false but Reason (R) is true.

Previously asked in: 2025 30/4/1 Q19

◆ **Real Numbers** 1.2 The Fundamental Theorem of Arithmetic

Q5. § 1.1 Introduction § 1.2 The Fundamental Theorem of Arithmetic § 1.3 Revisiting Irrational Numbers **[1]**

The natural number 1 is :

A a prime number.
B a composite number.
C prime as well as composite.
D neither prime nor composite.

Previously asked in: 2026 30/2/1 Q2

◆ **Real Numbers** 1.1 Introduction

Q6. § 1.4 Summary **[1]**

The HCF of 960 and 432 is :

(a) 48
(b) 54
(c) 72
(d) 36

Previously asked in: 2026 30/1/1 Q1

◆ **Real Numbers** HCF using Euclid's Division Algorithm / Prime Factorisation

Q7. § 1.2 The Fundamental Theorem of Arithmetic § 1.3 Revisiting Irrational Numbers § 1.4 Summary **[1]**

Assertion (A) : The number 5^n cannot end with the digit 0, where n is a natural number.
Reason (R) : Prime factorisation of 5 has only two factors, 1 and 5.

(a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).
(b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).
(c) Assertion (A) is true, but Reason (R) is false.
(d) Assertion (A) is false, but Reason (R) is true.

Previously asked in: 2023 30/5/1 Q20

◆ **Real Numbers** 1.2 The Fundamental Theorem of Arithmetic

Q8. **[1]**

If $(-1)^n + (-1)^8 = 0$, then n is:

A any positive integer
B any negative integer
C any odd number
D any even number

Previously asked in: 2025 30/1/1 Q9

◆ **Real Numbers** Properties of Odd and Even Integers (Powers of -1)

Q9. § 1.4 Summary **[1]**

If $\mathrm{HCF}(98, 28) = m$ and $\mathrm{LCM}(98, 28) = n$, then the value of $n - 7m$ is:

A 0
B 28
C 98
D 198

Previously asked in: 2025 30/1/1 Q6

◆ **Real Numbers** 1.2 The Fundamental Theorem of Arithmetic

Q10. **[2]**

If the HCF of 210 and 55 is expressed as $210 \times 5 + 55m$, then find the value of m.

Previously asked in: 2026 30/4/1 Q24 (OR-2)

◆ **Real Numbers** Euclid's Division Algorithm / HCF as linear combination

Q11. **[1]**

For any natural number n, 5^n ends with the digit :

A 0
B 5
C 3
D 2

Previously asked in: 2026 30/2/1 Q3

◆ **Real Numbers** Units digit / last digit of powers of natural numbers

Q12. **[1]**

For any natural number n, 6^n ends with the digit :

(a) 0
(b) 6
(c) 3
(d) 2

Previously asked in: 2026 30/1/1 Q3

◆ **Real Numbers** Properties of powers of natural numbers / last digit of 6^n

Q13. § 1.2 The Fundamental Theorem of Arithmetic **[4]**

> Teaching Mathematics through activities is a powerful approach that enhances students' understanding and engagement. Keeping this in mind, Ms. Mukta planned a prime number game for class 5 students. She announces the number 2 in her class and asked the first student to multiply it by a prime number and then pass it to second student. Second student also multiplied it by a prime number and passed it to third student. In this way by multiplying to a prime number, the last student got 173250.

Now, Mukta asked some questions as given below to the students :

- **(i)** What is the least prime number used by students ? [1]
- **(ii)** How many students are in the class ? [2]
- **(iii)** Which prime number has been used maximum times ? [1]

Previously asked in: 2024 30/3/1 Q38

◆ **Real Numbers** Prime Numbers and Factorization

Q14. § 1.2 The Fundamental Theorem of Arithmetic **[1]**

The natural number 2 is :

(a) a prime number
(b) a composite number
(c) prime as well as composite
(d) neither prime nor composite

Previously asked in: 2026 30/1/1 Q2

◆ **Real Numbers** Least composite and least prime number identification

Q15. § 1.4 Summary **[1]**

If $p^2 = \frac{32}{50}$, then p is a/an

A whole number
B integer
C rational number
D irrational number

Previously asked in: 2023 30/6/1 Q1

◆ **Real Numbers** Rational and Irrational Numbers

Q16. § 1.3 Revisiting Irrational Numbers § 1.4 Summary **[1]**

Assertion (A): The perimeter of $\triangle ABC$ is a rational number. Reason (R): The sum of the squares of two rational numbers is always rational.

A Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A).
B Both Assertion (A) and Reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).
C Assertion (A) is true but Reason (R) is false.
D Assertion (A) is false but Reason (R) is true.

Previously asked in: 2023 30/1/1 Q20

◆ **Real Numbers** 1.3 Revisiting Irrational Numbers

Q17. **[1]**

$\sqrt{0.4}$ is a/an

A natural number
B integer
C rational number
D irrational number

Previously asked in: 2025 30/6/1 Q1

◆ **Real Numbers** Irrational Numbers

Q18. **[1]**

$\left(\sqrt{3}+2\right)^2+\left(\sqrt{3}-2\right)^2$ is a/an

A positive rational number
B negative rational number
C positive irrational number
D negative irrational number

Previously asked in: 2025 30/5/1 Q1

◆ **Real Numbers** Rational and Irrational Numbers – Identifying nature of expressions

Q19. **[1]**

$\left(1+\sqrt{3}\right)^2-\left(1-\sqrt{3}\right)^2$ is :

(a) a positive rational number.
(b) a negative integer.
(c) a positive irrational number.
(d) a negative irrational number.

Previously asked in: 2025 30/4/1 Q2

◆ **Real Numbers** 1.3 Revisiting Irrational Numbers

Q20. § 1.4 Summary **[1]**

A pair of irrational numbers whose product is a rational number is :

A $(\sqrt{16},\ \sqrt{4})$
B $(\sqrt{5},\ \sqrt{2})$
C $(\sqrt{3},\ \sqrt{27})$
D $(\sqrt{36},\ \sqrt{2})$

Previously asked in: 2024 30/3/1 Q14

◆ **Real Numbers** 1.3 Revisiting Irrational Numbers

Q21. § 1.3 Revisiting Irrational Numbers § 1.4 Summary **[1]**

Which of the following is a rational number between $\sqrt{3}$ and $\sqrt{5}$?

A $1{\cdot}4142387954012\ldots$
B $\sqrt{4}$
C $\sqrt{\dfrac{15}{4}}$
D $1{\cdot}857142\ldots$

Previously asked in: 2025 30/1/1 Q14

◆ **Real Numbers** 1.3 Revisiting Irrational Numbers

Q22. § 1.3 Revisiting Irrational Numbers **[2]**

Prove that $2+3\sqrt{5}$ is an irrational number given that $\sqrt{5}$ is irrational.

Previously asked in: 2026 30/4/1 Q24 (OR-1)

◆ **Real Numbers** 1.3 Revisiting Irrational Numbers

Q23. § 1.3 Revisiting Irrational Numbers **[1]**

Assertion (A): $(\sqrt{3}+\sqrt{5})$ is an irrational number.

Reason (R): Sum of any two irrational numbers is always irrational.

Select the correct answer from the options (A), (B), (C) and (D) as given below:

A Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).
B Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
C Assertion (A) is true, but Reason (R) is false.
D Assertion (A) is false, but Reason (R) is true.

Previously asked in: 2026 30/4/1 Q20

◆ **Real Numbers** 1.3 Revisiting Irrational Numbers

Q24. **[3]**

In a teachers' workshop, the number of teachers teaching French, Hindi and English are 48, 80 and 144 respectively. Find the minimum number of rooms required if in each room the same number of teachers are seated and all of them are of the same subject.

Previously asked in: 2024 30/1/1 Q27

◆ **Real Numbers** HCF Application – Grouping/Minimum Rooms Problems

Q25. § 1.4 Summary **[1]**

If two positive integers p and q can be expressed as $p = 18\,a^2b^4$ and $q = 20\,a^3b^2$, where a and b are prime numbers, then LCM (p, q) is :

(a) $2\,a^2b^2$
(b) $180\,a^2b^2$
(c) $12\,a^2b^2$
(d) $180\,a^3b^4$

Previously asked in: 2024 30/1/1 Q5

◆ **Real Numbers** LCM of numbers expressed in prime factorisation form

Q26. **[3]**

The dimensions of a window are 156 cm $\times$ 216 cm. Arjun wants to put grill on the window creating complete squares of maximum size. Determine the side length of the square and hence find the number of squares formed.

Previously asked in: 2026 30/5/1 Q31

◆ **Real Numbers** HCF / GCD Application – Maximum size of square tiles/grills

Q27. § 1.4 Summary **[1]**

Directions: Two statements are given, one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer from the codes (A), (B), (C) and (D) as given below.

Assertion (A) : H.C.F. $(36m^2, 18m) = 18m$, where m is a prime number.

Reason (R) : H.C.F. of two numbers is always less than or equal to the smaller number.

(A) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).
(B) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).
(C) Assertion (A) is true, but Reason (R) is false.
(D) Assertion (A) is false, but Reason (R) is true.

Previously asked in: 2026 30/5/1 Q20

◆ **Real Numbers** | HCF of algebraic expressions / monomials | Properties of HCF (HCF ≤ smaller number)

Q28. § 1.4 Summary **[3]**

Find the HCF and LCM of 26, 65 and 117, using prime factorisation.

Previously asked in: 2023 30/6/1 Q27(A)

◆ **Real Numbers** | HCF and LCM using Prime Factorisation

Q29. § 1.4 Summary **[2]**

Find the HCF and LCM of 72 and 120.

Previously asked in: 2023 30/6/1 Q21(B)

◆ **Real Numbers** | HCF and LCM using Prime Factorisation

Q30. **[2]**

Show that 6^n can not end with digit 0 for any natural number 'n'.

Previously asked in: 2023 30/6/1 Q21(A)

◆ **Real Numbers** | Fundamental Theorem of Arithmetic – prime factorisation of 6^n and divisibility by 10

Q31. § 1.4 Summary **[3]**

Let p, q and r be three distinct prime numbers. Check whether $p \cdot q \cdot r + q$ is a composite number or not. Further, give an example for 3 distinct primes p, q, r such that
(i) $p \cdot q \cdot r + 1$ is a composite number.
(ii) $p \cdot q \cdot r + 1$ is a prime number.

Previously asked in: 2025 30/6/1 Q26(b)

◆ **Real Numbers** | Composite numbers and prime factorisation arguments | Examples involving products of distinct primes ± 1 being prime or composite

Q32. § 1.4 Summary **[1]**

Directions: A statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.
Assertion (A): For any two prime numbers p and q, their HCF is 1 and LCM is p + q.
Reason (R): For any two natural numbers, HCF × LCM = product of numbers.

- A Both Assertion (A) and Reason (R) are true and Reason (R) is correct explanation of Assertion (A).
- B Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
- C Assertion (A) is true, but Reason (R) is false.
- D Assertion (A) is false, but Reason (R) is true.

Previously asked in: 2025 30/6/1 Q19

◆ **Real Numbers** | HCF and LCM of prime numbers | Relationship between HCF, LCM and product of two natural numbers

Q33. § 1.2 The Fundamental Theorem of Arithmetic | § 1.4 Summary **[3]**

State true or false for each of the following statements and justify in each case :

- **(i)** $2 \times 3 \times 5 \times 7 + 7$ is a composite number.
- **(ii)** $2 \times 3 \times 5 \times 7 + 1$ is a composite number.

Previously asked in: 2025 30/5/1 Q26(b)

◆ **Real Numbers** | Composite Numbers and Prime Factorization

Q34. § 1.4 Summary **[1]**

Let $x = a^2b^3c^n$ and $y = a^3b^mc^2$, where a, b, c are prime numbers. If LCM of x and y is $a^3b^4c^3$, then the value of m + n is

- A 10
- B 7
- C 6
- D 5

Previously asked in: 2025 30/5/1 Q2

◆ **Real Numbers** | LCM of numbers expressed as prime factorizations

Q35. § 1.4 Summary **[3]**

Let x and y be two distinct prime numbers and $p = x^2y^3$, $q = xy^4$, $r = x^5y^2$. Find the HCF and LCM of p, q and r. Further check if $\text{HCF}(p, q, r) \times \text{LCM}(p, q, r) = p \times q \times r$ or not.

Previously asked in: 2025 30/4/1 Q26(B)

◆ **Real Numbers** | HCF and LCM of numbers using prime factorisation | Relationship between HCF and LCM for more than two numbers

Q36. § 1.4 Summary **[1]**

If $x = ab^3$ and $y = a^3b$, where a and b are prime numbers, then $[\text{HCF}(x, y) - \text{LCM}(x, y)]$ is equal to :

- (a) $1 - a^3b^3$
- (b) $ab(1 - ab)$
- (c) $ab - a^4b^4$
- (d) $ab(1 - ab)(1 + ab)$

Previously asked in: 2025 30/4/1 Q1

◆ **Real Numbers** | HCF and LCM of numbers expressed as products of prime factors

Q37. **[2]**

Find the length of the plank that can be used to measure the lengths 4 m 20 cm and 5 m 4 cm exactly, in the least time.

Previously asked in: 2026 30/3/1 Q21

◆ **Real Numbers** | HCF (Highest Common Factor) application – finding the largest unit of measurement

Q38. § 1.2 The Fundamental Theorem of Arithmetic **[1]**

$(3 \times 11 \times 13 + 3)$ is :

A a prime number
B divisible by 13
C a composite number
D an odd number

Previously asked in: 2026 30/3/1 Q4

◆ **Real Numbers** | Composite and Prime Numbers

Q39. § 1.4 Summary **[1]**

The LCM of 960 and 240 is :

A 960
B 240
C 60
D 15

Previously asked in: 2026 30/2/1 Q1

◆ **Real Numbers** | LCM of two numbers

Q40. **[3]**

The traffic lights at three different road crossings change after every 48 seconds, 72 seconds and 108 seconds respectively. If they change simultaneously at 7 a.m., at what time will they change together next ?

Previously asked in: 2023 30/5/1 Q26 (OR-2)

◆ **Real Numbers** | LCM using Prime Factorisation

Q41. § 1.4 Summary **[2]**

Using prime factorisation, find HCF and LCM of 96 and 120.

Previously asked in: 2023 30/5/1 Q23

◆ **Real Numbers** | HCF and LCM using Prime Factorisation

Q42. § 1.4 Summary **[2]**

Two numbers are in the ratio $2 : 3$ and their LCM is 180. What is the HCF of these numbers ?

Previously asked in: 2023 30/4/1 Q21

◆ **Real Numbers** | Relationship between HCF, LCM, and ratio of two numbers

Q43. § 1.4 Summary **[1]**

The ratio of HCF to LCM of the least composite number and the least prime number is :

(a) $1 : 2$
(b) $2 : 1$
(c) $1 : 1$
(d) $1 : 3$

Previously asked in: 2023 30/4/1 Q1

◆ **Real Numbers** | HCF and LCM of numbers | Least composite and least prime number identification

Q44. **[3]**

Three bells ring at intervals of 6, 12 and 18 minutes. If all the three bells rang at 6 a.m., when will they ring together again?

Previously asked in: 2023 30/2/1 Q26(b) (OR-2)

◆ **Real Numbers** | LCM and HCF Applications

Q45. § 1.4 Summary **[3]**

Find by prime factorisation the LCM of the numbers 18180 and 7575. Also, find the HCF of the two numbers.

Previously asked in: 2023 30/2/1 Q26(a) (OR-1)

◆ **Real Numbers** | Prime Factorisation to find LCM and HCF

Q46. § 1.4 Summary **[1]**

If p and q are natural numbers and p is a multiple of q, then what is the HCF of p and q?

(a) pq
(b) p
(c) q
(d) $p+q$

Previously asked in: 2023 30/2/1 Q4

◆ **Real Numbers** | HCF when one number is a multiple of another

Q47. § 1.4 Summary **[1]**

If the product of two co-prime numbers is 553, then their HCF is :

A 1
B 553
C 7
D 79

Previously asked in: 2024 30/5/1 Q14

◆ **Real Numbers** | HCF of Co-prime Numbers

Q48. § 1.4 Summary **[1]**

The LCM of three numbers 28, 44, 132 is :

A 258
B 231
C 462
D 924

Previously asked in: 2024 30/5/1 Q13

◆ **Real Numbers** | LCM of Numbers

Q49. § 1.1 Introduction | § 1.2 The Fundamental Theorem of Arithmetic **[1]**

The greatest number which divides 281 and 1249, leaving remainder 5 and 7 respectively, is :

A 23
B 276
C 138
D 69

Previously asked in: 2024 30/5/1 Q10

◆ **Real Numbers** | Highest Common Factor (HCF) / Euclid's Division Lemma

Q50. **[2]**

Three bells toll at intervals of 9, 12 and 15 minutes respectively. If they start tolling together, after what time will they next toll together ?

Previously asked in: 2024 30/4/1 Q21

◆ **Real Numbers** LCM and HCF Applications

Q51. § 1.4 Summary **[1]**

The HCF of two numbers 65 and 104 is 13. If LCM of 65 and 104 is $40x$, then the value of x is :

A 5
B 13
C 40
D 8

Previously asked in: 2024 30/4/1 Q2

◆ **Real Numbers** Relationship between HCF and LCM of two numbers

Q52. § 1.4 Summary **[1]**

Given $\mathrm{HCF}(2520, 6600) = 40, \mathrm{LCM}(2520, 6600) = 252 \times k$, then the value of k is :

A 1650
B 1600
C 165
D 1625

Previously asked in: 2024 30/3/1 Q13

◆ **Real Numbers** Relationship between HCF and LCM of two numbers

Q53. § 1.4 Summary **[1]**

If $a = 2^2 \times 3^x, b = 2^2 \times 3 \times 5, c = 2^2 \times 3 \times 7$ and $\mathrm{LCM}(a, b, c) = 3780$, then x is equal to

A 1
B 2
C 3
D 0

Previously asked in: 2024 30/3/1 Q5

◆ **Real Numbers** LCM using Prime Factorisation

Q54. § 1.3 Revisiting Irrational Numbers **[2]**

Can the number $(15)^n$, n being a natural number, end with the digit 0? Give reasons.

Previously asked in: 2024 30/2/1 Q21

◆ **Real Numbers** Fundamental Theorem of Arithmetic – Prime Factorisation and Ending Digits

Q55. § 1.4 Summary **[1]**

If $\mathrm{HCF}(2520, 6600) = 40$ and $\mathrm{LCM}(2520, 6600) = 252 \times k$, then the value of k is

(A) 1650
(B) 1600
(C) 165
(D) 1625

Previously asked in: 2024 30/2/1 Q5

◆ **Real Numbers** Relationship between HCF and LCM of two numbers

Q56. § 1.4 Summary **[2]**

Two numbers are in the ratio $4:5$ and their HCF is 11. Find the LCM of these numbers.

Previously asked in: 2025 30/3/1 Q23 (OR-2)

◆ **Real Numbers** | HCF and LCM relationship – finding LCM given ratio and HCF

Q57. **[2]**

Find the smallest number which is divisible by both 644 and 462.

Previously asked in: 2025 30/3/1 Q23 (OR-1)

◆ **Real Numbers** | LCM using Prime Factorisation

Q58. § 1.4 Summary **[1]**

If x is the LCM of 4, 6, 8 and y is the LCM of 3, 5, 7 and p is the LCM of x and y, then which of the following is true?

- A $p = 35x$
- B $p = 4y$
- C $p = 8x$
- D $p = 16y$

Previously asked in: 2025 30/3/1 Q2

◆ **Real Numbers** | LCM and HCF of positive integers

Q59. § 1.4 Summary **[1]**

The HCF of 40, 110 and 360 is :

- A 40
- B 110
- C 360
- D 10

Previously asked in: 2025 30/2/1 Q18

◆ **Real Numbers** | HCF (Highest Common Factor) of Numbers

Q60. § 1.2 The Fundamental Theorem of Arithmetic | § 1.4 Summary **[1]**

The sum of the exponents of prime factors in the prime factorisation of 4004 is :

- A 5
- B 4
- C 3
- D 2

Previously asked in: 2025 30/2/1 Q10

◆ **Real Numbers** | Prime Factorisation and Exponents of Prime Factors

Q61. **[1]**

The least number which is a perfect square and is divisible by each of 16, 20 and 50, is :

- A 1200
- B 100
- C 3600
- D 2400

Previously asked in: 2025 30/2/1 Q4

◆ **Real Numbers** | LCM and Perfect Squares using Prime Factorisation

Q62. **[3]**

Find the greatest number less than 10,000 which is exactly divisible by 48, 60 and 65.

Previously asked in: 2026 30/4/1 Q31

◆ **Real Numbers** | LCM and HCF Applications

Q63. § 1.3 Revisiting Irrational Numbers **[2]**

Prove that $5 - 2\sqrt{3}$ is an irrational number. It is given that $\sqrt{3}$ is an irrational number.

Previously asked in: 2024 30/1/1 Q25(A)

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q64. § 1.3 Revisiting Irrational Numbers **[2]**

Prove that $2 - 5\sqrt{3}$ is an irrational number given that $\sqrt{3}$ is irrational.

Previously asked in: 2026 30/5/1 Q21

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q65. § 1.3 Revisiting Irrational Numbers **[3]**

Prove that $\sqrt{2}$ is an irrational number.

Previously asked in: 2025 30/4/1 Q26(A); 2023 30/6/1 Q27(B) — **2×**

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q66. § 1.3 Revisiting Irrational Numbers | § 1.4 Summary **[2]**

Prove that $2 + \sqrt{3}$ is an irrational number, given that $\sqrt{3}$ is an irrational number.

Previously asked in: 2023 30/2/1 Q21

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q67. § 1.3 Revisiting Irrational Numbers | § 1.4 Summary **[3]**

Prove that $\left(\sqrt{2} + \frac{\sqrt{3}}{2}\right)$ is an irrational number, given that $\sqrt{6}$ is an irrational number.

Previously asked in: 2024 30/5/1 Q26(b) (OR-2)

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q68. § 1.3 Revisiting Irrational Numbers **[3]**

Prove that $\frac{2 - \sqrt{3}}{5}$ is an irrational number, given that $\sqrt{3}$ is an irrational number.

Previously asked in: 2024 30/4/1 Q30

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q69. § 1.3 Revisiting Irrational Numbers | § 1.4 Summary **[3]**

Prove that $4 + 3\sqrt{2}$ is an irrational number given that $\sqrt{2}$ is an irrational number.

Previously asked in: 2025 30/3/1 Q27

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q70. § 1.3 Revisiting Irrational Numbers | § 1.4 Summary **[3]**

Prove that $\sqrt{3}$ is an irrational number.

Previously asked in: 2026 30/1/1 Q26; 2025 30/2/1 Q30; 2025 30/5/1 Q26(a); 2024 30/5/1 Q26(a) (OR-1); 2023 30/5/1 Q26 (OR-1) — **5×**

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

Q71. § 1.3 Revisiting Irrational Numbers **[3]**

Prove that $\sqrt{5}$ is an irrational number.

Previously asked in: 2026 30/2/1 Q26; 2026 30/3/1 Q28; 2025 30/1/1 Q29; 2025 30/6/1 Q26(a); 2024 30/2/1 Q27; 2023 30/4/1 Q27; 2023 30/1/1 Q27 — 7×

◆ **Real Numbers** | 1.3 Revisiting Irrational Numbers | A1.7 Proof by Contradiction

---

Available for free from:
https://cbsegrade10studyguide.com
https://github.com/orgs/cbse-free-resources/repositories