

CBSE CLASS X

Mathematics Standard (041)

QUESTION PAPER

From previous CBSE Board Exam questions

Code: AA7248

Questions: 15

Maximum Marks: 31

Generated: 2026-06-15 13:05

SELECTIONS USED

Source	Previous-year board
Subject	Mathematics
Lessons	Proofs in Mathematics
Year	2022-2026
Questions selected	15

Composition — Types: 6 Short · 4 Very short

Q1. § 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

Q2. § 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

Q3. § 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

Q4. § 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

Q5. § 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

Q6. § 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

Q7. § 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

Q8. § 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

Q9. § 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

Q10.

[2]

△ Proofs in Mathematics — Enrichment material — not examinable in the Board exam (per CBSE 2026-27 curriculum) NCERT enrichment appendix; not part of the examinable curriculum (omitted from the Course Structure). [\[source: Course Structure \(appendices not listed\)\]](#)

Show that the number $5 \times 11 \times 17 + 3 \times 11$ is a composite number.

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

◆ Proofs in Mathematics

Composite Numbers and Factorization Proofs

Available for free from:

<https://cbsegrade10studyguide.com>

<https://github.com/orgs/cbse-free-resources/repositories>

Available for free from:

<https://cbsegrade10studyguide.com>

<https://github.com/orgs/cbse-free-resources/repositories>