

CLASS 11

MATHS

NCERT SOLUTIONS

NCERT Solutions for Class 11 Maths Chapter 1 Sets (2026-27)

Sets is the very first chapter of Class 11 Maths, and it quietly sits underneath almost everything you will study for the rest of the year -- relations and functions, sequences, probability, and even coordinate geometry all use set notation and set language. In CBSE board exams, Sets usually contributes 1-2 direct q...

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Class 11 Mathematics Chapter 1 – Notes and Extra Questions

Sets is the very first chapter of Class 11 Maths, and it quietly sits underneath almost everything you will study for the rest of the year — relations and functions, sequences, probability, and even coordinate geometry all use set notation and set language. In CBSE board exams, Sets usually contributes 1-2 direct questions, but the real reason to master it is that a shaky understanding of unions, intersections, and complements will slow you down in later chapters. Below are complete, step-by-step solutions to every exercise in the 2026-27 rationalised NCERT textbook (Exercises 1.1 to 1.6 and the Miscellaneous Exercise). These Class 11 Mathematics Chapter 1 solutions are also useful as quick revision notes before exams.

Exercise 1.1

Q1. Which of the following are sets? Justify your answer.

A collection qualifies as a set only if it is **well-defined** — meaning any object can be clearly decided as belonging to it or not, without personal opinion.

Months of a year beginning with letter J — **a set** (January, June, July are fixed and well-defined).

Ten most talented writers of India — **not a set** (“talented” is subjective).

Eleven best cricket batsmen of the world — **not a set** (“best” is a matter of opinion).

All boys in your class — **a set** (clearly decidable membership).

All natural numbers less than 100 — **a set** (well-defined).

Novels written by Munshi Prem Chand — **a set** (a fixed, verifiable list).

All even integers — **a set**.

Questions in this chapter — **a set**.

Most dangerous animals in the world — **not a set** (“dangerous” is subjective).

Q2. Let $A = \{1, 2, 3, 4, 5, 6\}$. Insert $\in$ or $\notin$.

$5 \in A$

$8 \notin A$

$0 \notin A$

$4 \in A$

$2 \in A$

$10 \notin A$

Q3. Write in roster form.

$$\{x : x \text{ is an integer, } -3 \leq x < 7\} = \{-3, -2, -1, 0, 1, 2, 3, 4, 5, 6\}$$

$$\{x : x \text{ is a natural number less than 6}\} = \{1, 2, 3, 4, 5\}$$

$$\{x : x \text{ is a two-digit natural number, sum of digits} = 8\} = \{17, 26, 35, 44, 53, 62, 71, 80\}$$

$$\{x : x \text{ is a prime number that divides 60}\} = \{2, 3, 5\}$$

$$\text{Letters of the word TRIGONOMETRY} = \{T, R, I, G, O, N, M, E, Y\}$$

$$\text{Letters of the word BETTER} = \{B, E, T, R\}$$

Q4. Write in set-builder form.

$$\{3, 6, 9, 12\} = \{x : x = 3n, n \in \mathbb{N}, 1 \leq n \leq 4\}$$

$$\{2, 4, 8, 16, 32\} = \{x : x = 2^n, n \in \mathbb{N}, 1 \leq n \leq 5\}$$

$$\{5, 25, 125, 625\} = \{x : x = 5^n, n \in \mathbb{N}, 1 \leq n \leq 4\}$$

$$\{2, 4, 6, 8, 10, 12, 14\} = \{x : x \text{ is an even natural number, } x \leq 14\}$$

$$\{1, 4, 9, \dots, 100\} = \{x : x = n^2, n \in \mathbb{N}, 1 \leq n \leq 10\}$$

Q5. List all elements.

$$A = \{x : x \text{ is an odd natural number}\} \rightarrow A = \{1, 3, 5, 7, 9, \dots\} \text{ — an infinite set}$$

$$B = \{x : x \text{ is an integer, } -1/2 < x < 9/2\} \rightarrow B = \{0, 1, 2, 3, 4\}$$

$$C = \{x : x \text{ is an integer, } x^2 \leq 4\} \rightarrow C = \{-2, -1, 0, 1, 2\}$$

$$D = \text{letters of the word "LOYAL"} \rightarrow D = \{L, O, Y, A\}$$

$$E = \text{months of the year not having 31 days} \rightarrow E = \{\text{February, April, June, September, November}\}$$

$$F = \text{consonants in the English alphabet that come before k} \rightarrow F = \{b, c, d, f, g, h, j\}$$

Q6. Match roster form with set-builder form.

$$\{1, 2, 3, 6\} \leftrightarrow \{x : x \text{ is a natural number and a divisor of 6}\}$$

$$\{2, 3\} \leftrightarrow \{x : x \text{ is a prime number and a divisor of 6}\}$$

$$\{M, A, T, H, E, I, C, S\} \leftrightarrow \{x : x \text{ is a letter of the word MATHEMATICS}\}$$

$$\{1, 3, 5, 7, 9\} \leftrightarrow \{x : x \text{ is an odd natural number less than } 10\}$$

Exercise 1.2

Q1. Which of the following are examples of the null set?

$\{x : x \text{ is an odd natural number divisible by } 2\}$ — **null set**.

$\{x : x \text{ is an even prime number}\}$ — **not null**; equals $\{2\}$.

$\{x : x \text{ is a natural number, } x < 5 \text{ and } x > 7\}$ — **null set**.

$\{y : y \text{ is a point common to two parallel lines}\}$ — **null set**.

Q2. Which of the following sets are finite or infinite?

Set of months of a year — **finite** (12 elements).

$\{1, 2, 3, \dots\}$ — **infinite**.

$\{1, 2, 3, \dots, 99, 100\}$ — **finite**.

Positive integers greater than 100 — **infinite**.

Prime numbers less than 99 — **finite**.

Q3. State whether finite or infinite.

Lines parallel to the x-axis — **infinite**.

Letters in the English alphabet — **finite** (26 letters).

Multiples of 5 — **infinite**.

Animals living on the earth — **finite**.

Circles passing through the origin — **infinite**.

Q4. State whether $A = B$.

$A = \{a, b, c, d\}$, $B = \{d, c, b, a\} \rightarrow A = B$.

$A = \{4, 8, 12, 16\}$, $B = \{8, 4, 16, 18\} \rightarrow A \neq B$.

$A = \{2, 4, 6, 8, 10\}$, $B = \{x : \text{multiple of } 2, x \leq 10\} \rightarrow A = B$.

$A = \{x : \text{multiple of } 10\}$, $B = \{10, 15, 20, 25, \dots\} \rightarrow A \neq B$.

Q5. Are the pairs of sets equal? Give reasons.

$A = \{2, 3\}$, $B = \{x : x^2 + 5x + 6 = 0\} \rightarrow B = \{-2, -3\}$. **Not equal.**

$A = \text{letters of "FOLLOW"} = \{F, O, L, W\}$, $B = \text{letters of "WOLF"} = \{W, O, L, F\}$. **Equal.**

Q6. Select equal sets.

$A = \{2, 4, 8, 12\}$, $B = \{1, 2, 3, 4\}$, $C = \{4, 8, 12, 14\}$, $D = \{3, 1, 4, 2\}$, $E = \{-1, 1\}$, $F = \{0, a\}$, $G = \{1, -1\}$, $H = \{0, 1\}$.

$B = D = \{1, 2, 3, 4\}$; $E = G = \{-1, 1\}$.

Exercise 1.3

Q1. Fill in $\subset$ or $\not\subset$.

$\{2, 3, 4\} \subset \{1, 2, 3, 4, 5\}$

$\{a, b, c\} \not\subset \{b, c, d\}$

$\{x: \text{student of your school}\} \subset \{x: \text{student of your city}\}$

$\{x: \text{circle in a plane}\} \not\subset \{x: \text{circle radius 1 unit}\}$

$\{x: \text{triangle in a plane}\} \not\subset \{x: \text{rectangle in the plane}\}$

$\{x: \text{equilateral triangle}\} \subset \{x: \text{triangle}\}$

$\{x: \text{even natural number}\} \subset \{x: \text{integer}\}$

Q2. True or false?

$\{a, b\} \not\subset \{b, c, a\}$ — **False.**

$\{a, e\} \subset \text{vowels}$ — **True.**

$\{1, 2, 3\} \subset \{1, 3, 5\}$ — **False.**

$\{a\} \subset \{a, b, c\}$ — **True.**

$\{a\} \in \{a, b, c\}$ — **False.**

$\{\text{even nat} < 6\} \subset \{\text{nat dividing } 36\}$ — **True.**

Q3. $A = \{1, 2, \{3, 4\}, 5\}$. Which statements are incorrect and why?

The key trap: $\{3,4\}$ is itself a single element of A , not individual numbers.

$\{3,4\} \subset A$ — Incorrect (should be $\in$).

$\{3,4\} \in A$ — Correct.

$\{\{3,4\}\} \subset A$ — Correct.

$1 \in A$ — Correct.

$1 \subset A$ — Incorrect (should be $\in$).

$\{1,2,5\} \subset A$ — Correct.

$\{1,2,5\} \in A$ — Incorrect.

$\{1,2,3\} \subset A$ — Incorrect (3 alone is not an element).

$\varnothing \in A$ — Incorrect.

$\varnothing \subset A$ — Correct (empty set is a subset of every set).

$\{\varnothing\} \subset A$ — Incorrect.

Q4. Write down all the subsets.

$\{a\} \rightarrow \varnothing, \{a\}$

$\{a,b\} \rightarrow \varnothing, \{a\}, \{b\}, \{a,b\}$

$\{1,2,3\} \rightarrow \varnothing, \{1\}, \{2\}, \{3\}, \{1,2\}, \{1,3\}, \{2,3\}, \{1,2,3\}$

$\varnothing \rightarrow \varnothing$ (only one subset — itself)

Q5. How many elements has $P(A)$, if $A = \varnothing$?

$2^0 = 1$ **element** (namely $\varnothing$ itself).

Q6. Write as intervals.

$\{x \in \mathbb{R}: -4 < x \leq 6\} = (-4, 6]$

$\{x \in \mathbb{R}: -12 < x < -10\} = (-12, -10)$

$\{x \in \mathbb{R}: 0 \leq x < 7\} = [0, 7)$

$\{x \in \mathbb{R}: 3 \leq x \leq 4\} = [3, 4]$

Q7. Write intervals in set-builder form.

$$(-3,0) = \{x \in \mathbb{R}: -3 < x < 0\}$$

$$[6,12] = \{x \in \mathbb{R}: 6 \leq x \leq 12\}$$

$$(6,12] = \{x \in \mathbb{R}: 6 < x \leq 12\}$$

$$[-23,5) = \{x \in \mathbb{R}: -23 \leq x < 5\}$$

Q8. Propose a universal set.

Right triangles $\rightarrow$ all triangles in a plane.

Isosceles triangles $\rightarrow$ all triangles in a plane.

Q9. $A=\{1,3,5\}$, $B=\{2,4,6\}$, $C=\{0,2,4,6,8\}$. Which can be a universal set for all three?

$\{0,1,2,\dots,10\}$ — **suitable** (contains all elements of A, B, C).

Exercise 1.4

Q1. Find the union of each pair of sets.

$$X=\{1,3,5\}, Y=\{1,2,3\} \rightarrow X \cup Y = \{1,2,3,5\}$$

$$A=\{a,e,i,o,u\}, B=\{a,b,c\} \rightarrow A \cup B = \{a,b,c,e,i,o,u\}$$

$$A=\{3,6,9\}, B=\{1,2,3,4,5\} \rightarrow A \cup B = \{1,2,3,4,5,6,9\}$$

$$A=\{2,3,4,5,6\}, B=\{7,8,9\} \rightarrow A \cup B = \{2,3,4,5,6,7,8,9\}$$

$$A=\{1,2,3\}, B=\emptyset \rightarrow A \cup B = \{1,2,3\}$$

Q2. $A=\{a,b\}$, $B=\{a,b,c\}$. Is $A \subset B$? What is $A \cup B$?

$A \subset B$; $A \cup B = \{a,b,c\}$.

Q3. If $A \subset B$, what is $A \cup B$?

$$A \cup B = B.$$

Q4. $A=\{1,2,3,4\}$, $B=\{3,4,5,6\}$, $C=\{5,6,7,8\}$, $D=\{7,8,9,10\}$; find

$$A \cup B = \{1,2,3,4,5,6\}$$

$$A \cup C = \{1,2,3,4,5,6,7,8\}$$

$$B \cup C = \{3, 4, 5, 6, 7, 8\}$$

$$B \cup D = \{3, 4, 5, 6, 7, 8, 9, 10\}$$

$$A \cup B \cup C = \{1..8\}$$

$$A \cup B \cup D = \{1..10\}$$

$$B \cup C \cup D = \{3..10\}$$

Q5. Find the intersection of each pair.

$$X = \{1, 3, 5\}, Y = \{1, 2, 3\} \rightarrow X \cap Y = \{1, 3\}$$

$$A = \{a, e, i, o, u\}, B = \{a, b, c\} \rightarrow A \cap B = \{a\}$$

$$A = \{3, 6, 9, 12\}, B = \{5, 10\} \rightarrow A \cap B = \varnothing$$

$$\text{Natural numbers} \cap \text{negative naturals} = \varnothing$$

$$A = \{2, 3, 4\}, B = \varnothing \rightarrow A \cap B = \varnothing$$

Q6. $A = \{3, 5, 7, 9, 11\}$, $B = \{7, 9, 11, 13\}$, $C = \{11, 13, 15\}$, $D = \{15, 17\}$; find

$$A \cap B = \{7, 9, 11\}$$

$$B \cap C = \{11, 13\}$$

$$A \cap C \cap D = \varnothing$$

$$A \cap C = \{11\}$$

$$B \cap D = \varnothing$$

$$A \cap (B \cup C) = \{7, 9, 11\}$$

$$A \cap D = \varnothing$$

$$A \cap (B \cup D) = \{7, 9, 11\}$$

$$(A \cap B) \cap (B \cup C) = \{7, 9, 11\}$$

$$(A \cup D) \cap (B \cup C) = \{7, 9, 11\}$$

Q7. $A = \text{naturals}$, $B = \text{even}$, $C = \text{odd}$, $D = \text{primes}$; find

$$A \cap B = B$$

$$A \cap C = C$$

$$A \cap D = D$$

$$B \cap C = \varnothing$$

$$B \cap D = \{2\}$$

$$C \cap D = D - \{2\} \text{ (all odd primes)}$$

Q8. Which pairs of sets are disjoint?

$\{1,2,3,4\}$ and $\{4,5,6\}$ — **not disjoint** (4 common).

$\{a,e,i,o,u\}$ and $\{c,d,e,f\}$ — **not disjoint** (e common).

Even integers and odd integers — **disjoint**.

Q9. $A=\{3,6,9,12,15,18,21\}$, $B=\{4,8,12,16,20\}$, $C=\{2,4,6,8,10,12,14,16\}$, $D=\{5,10,15,20\}$; find

$$A - B = \{3,6,9,15,18,21\}$$

$$A - C = \{3,9,15,18,21\}$$

$$A - D = \{3,6,9,12,18,21\}$$

$$B - A = \{4,8,16,20\}$$

$$C - A = \{2,4,8,10,14,16\}$$

$$D - A = \{5,10,20\}$$

$$B - C = \{20\}$$

$$B - D = \{4,8,12,16\}$$

$$C - B = \{2,6,10,14\}$$

$$D - B = \{5,10,15\}$$

$$C - D = \{2,4,6,8,12,14,16\}$$

$$D - C = \{5,15,20\}$$

Q10. $X=\{a,b,c,d\}$, $Y=\{f,b,d,g\}$; find

$$X - Y = \{a,c\}$$

$$Y - X = \{f, g\}$$

$$X \cap Y = \{b, d\}$$

Q11. R = reals, Q = rationals. What is R – Q?

R-Q = irrational numbers (e.g. $\sqrt{2}$, π , e).

Q12. State true or false.

$\{2, 3, 4, 5\}$ and $\{3, 6\}$ disjoint — **False**.

$\{a, e, i, o, u\}$ and $\{a, b, c, d\}$ disjoint — **False**.

$\{2, 6, 10, 14\}$ and $\{3, 7, 11, 15\}$ disjoint — **True**.

$\{2, 6, 10\}$ and $\{3, 7, 11\}$ disjoint — **True**.

Exercise 1.5

Q1. $U = \{1..9\}$, $A = \{1, 2, 3, 4\}$, $B = \{2, 4, 6, 8\}$, $C = \{3, 4, 5, 6\}$. Find complements.

$$A' = \{5, 6, 7, 8, 9\}$$

$$B' = \{1, 3, 5, 7, 9\}$$

$$C' = \{1, 2, 7, 8, 9\}$$

$$(A')' = A$$

$$(B-C)': B-C = \{2, 8\} \rightarrow \{1, 3, 4, 5, 6, 7, 9\}$$

$$(A \cup C)': A \cup C = \{1..6\} \rightarrow \{7, 8, 9\}$$

Q2. $U = \{1..10\}$, $A = \{3, 6, 9\}$, $B = \{1, 2, 3, 4, 5, 6\}$, $C = \{2, 4, 6, 8, 10\}$, $D = \{5, 10\}$. Find complements.

$$A' = \{1, 2, 4, 5, 7, 8, 10\}$$

$$B' = \{7, 8, 9, 10\}$$

$$C' = \{1, 3, 5, 7, 9\}$$

$$D' = \{1, 2, 3, 4, 6, 7, 8, 9\}$$

Q3. $U = N$. Find A' for each.

odd $\rightarrow$ even naturals

even $\rightarrow$ odd naturals

multiples of 3 $\rightarrow$ naturals not divisible by 3

primes $\rightarrow$ composites and 1

divisible by 3 and 5 $\rightarrow$ naturals not divisible by both

perfect squares $\rightarrow$ not perfect squares

perfect cubes $\rightarrow$ not perfect cubes

$$\{x+5=8\}=\{3\} \rightarrow N-\{3\}$$

$$\{2x+5=9\}=\{2\} \rightarrow N-\{2\}$$

$$\{x \geq 7\} \rightarrow \{x < 7\}$$

$$\{2x+1 > 10\} \rightarrow \{2x+1 \leq 10\}$$

Q4. Verify De Morgan's laws for $A=\{2,4,6,8\}$, $B=\{6,8,10,12\}$, $U=\{2,4,6,8,10,12\}$.

(i) $A \cup B = \{2,4,6,8,10,12\}$, $(A \cup B)' = \{14,16,18,20\}$. $A' = \{10,12,14,16,18,20\}$, $B' = \{2,4,14,16,18,20\}$, $A' \cap B' = \{14,16,18,20\}$. Matches, verifying $(A \cup B)' = A' \cap B'$.

(ii) $A \cap B = \{6,8\}$, $(A \cap B)' = \{2,4,10,12,14,16,18,20\}$. $A' \cup B' = \{2,4,10,12,14,16,18,20\}$. Matches, verifying $(A \cap B)' = A' \cup B'$.

Q5. Draw appropriate Venn diagrams.

$(A \cup B)'$ and $A' \cap B'$ shade the same region (outside both circles); $(A \cap B)'$ and $A' \cup B'$ shade the same region (everything except the overlap).

Q6. U =triangles, A =triangles with an angle $\neq 60^\circ$. What is A' ?

A' = equilateral triangles.

Q7. Fill in the blanks.

$$A \cup A' = U$$

$$\phi' \cap A = A$$

$$A \cap A' = \phi$$

$$U' \cap A = \phi$$

Exercise 1.6

Q1. $n(X)=17$, $n(Y)=23$, $n(X \cup Y)=38$. Find $n(X \cap Y)$.

$$38=17+23-n(X \cap Y) \Rightarrow n(X \cap Y)=2.$$

Q2. $n(X \cup Y)=18$, $n(X)=8$, $n(Y)=15$. Find $n(X \cap Y)$.

$$18=8+15-n(X \cap Y) \Rightarrow n(X \cap Y)=5.$$

Q3. 400 people: 250 speak Hindi, 200 speak English. How many speak both?

$$n(H \cap E)=250+200-400=50 \text{ people.}$$

Q4. S has 21, T has 32, $S \cap T$ has 11. Find $n(S \cup T)$.

$$21+32-11=42.$$

Q5. X has 40, $X \cup Y$ has 60, $X \cap Y$ has 10. Find $n(Y)$.

$$60=40+n(Y)-10 \Rightarrow n(Y)=30.$$

Q6. 50 speak French, 20 Spanish, 10 both. How many speak at least one?

$$50+20-10=60 \text{ people.}$$

Miscellaneous Exercise

Q1. $A=\{x \in \mathbb{R}: x^2-8x+12=0\}$, $B=\{2,4,6\}$, $C=\{2,4,6,8,\dots\}$, $D=\{6\}$. Which are subsets of one another?

$$A=\{2,6\}. D \subset A, D \subset B, D \subset C, A \subset B, A \subset C, B \subset C.$$

Q2. Decide true/false; prove if true, counter-example if false.

$$x \in A, A \in B \Rightarrow x \in B \text{ — False } (A=\{1\}, B=\{\{1\}, 2\}).$$

$$A \subset B, B \in C \Rightarrow A \in C \text{ — False } (A=\{1\}, B=\{1, 2\}, C=\{\{1, 2\}, 5\}).$$

$$A \subset B, B \subset C \Rightarrow A \subset C \text{ — True (transitivity).}$$

$$A \not\subset B, B \not\subset C \Rightarrow A \not\subset C \text{ — False } (A=\{1, 2\}, B=\{2, 3\}, C=\{1, 2, 4\}).$$

$$x \in A, A \not\subset B \Rightarrow x \in B \text{ — False } (A=\{1, 2\}, B=\{2, 3\}, x=1).$$

$$A \subset B, x \notin B \Rightarrow x \notin A \text{ — True.}$$

Q3. $A \cup B=A \cup C$ and $A \cap B=A \cap C$. Show $B=C$.

Let $x \in B$. Then $x \in A \cup C$, so $x \in A$ or $x \in C$. If $x \in A$, then $x \in A \cap B = A \cap C$, so $x \in C$. Either way $x \in C$, so $B \subset C$. By symmetry $C \subset B$. Hence **$B = C$** .

Q4. Show equivalence of: (i) $A \subset B$ (ii) $A - B = \emptyset$ (iii) $A \cup B = B$ (iv) $A \cap B = A$.

(i) $\Rightarrow$ (ii): every element of A is in B , so none is outside B . (ii) $\Rightarrow$ (iii): every element of A is already in B , so $A \cup B = B$. (iii) $\Rightarrow$ (iv): $A \subset A \cup B = B$ so $A \subset B$, hence $A \cap B = A$. (iv) $\Rightarrow$ (i): every element of A is, by definition, also in B .

Q5. If $A \subset B$, show $C - B \subset C - A$.

Let $x \in C - B$: $x \in C$, $x \notin B$. Since $A \subset B$, if $x \in A$ it would be in B — contradiction. So $x \notin A$. Hence $x \in C - A$. **$C - B \subset C - A$** .

Q6. $P(A) = P(B)$. Show $A = B$.

$A \in P(A) = P(B) \Rightarrow A \subset B$. Similarly $B \subset A$. Hence **$A = B$** .

Q7. Is $P(A) \cup P(B) = P(A \cup B)$ for any sets?

No. $A = \{1\}, B = \{2\}$: $P(A \cup B) = \{\emptyset, \{1\}, \{2\}, \{1, 2\}\}$, but $P(A) \cup P(B) = \{\emptyset, \{1\}, \{2\}\}$ — missing $\{1, 2\}$.

Q8. Show $A = (A \cap B) \cup (A - B)$ and $A \cup (B - A) = A \cup B$.

Every element of A is either in B (so in $A \cap B$) or not (so in $A - B$) — exhaustive, mutually exclusive. $B - A$ adds exactly the elements of B not already in A , giving $A \cup B$.

Q9. Show (i) $A \cup (A \cap B) = A$ (ii) $A \cap (A \cup B) = A$.

(i) $A \cap B \subset A$ always, so union adds nothing new. (ii) $A \subset A \cup B$ always, so intersection returns A .

Q10. Show $A \cap B = A \cap C$ need not imply $B = C$.

$A = \{1, 2\}, B = \{2, 3\}, C = \{2, 4\}$: $A \cap B = \{2\} = A \cap C$, but $B \neq C$.

Q11. $A \cap X = B \cap X = \emptyset$ and $A \cup X = B \cup X$. Show $A = B$.

$A = A \cap (A \cup X) = A \cap (B \cup X) = (A \cap B) \cup (A \cap X) = (A \cap B) \cup \emptyset = A \cap B$. Similarly $B = A \cap B$. Hence **$A = B$** .

Q12. Find A, B, C with $A \cap B, B \cap C, A \cap C$ non-empty but $A \cap B \cap C = \emptyset$.

$A = \{1, 2\}, B = \{2, 3\}, C = \{1, 3\}$: $A \cap B = \{2\}, B \cap C = \{3\}, A \cap C = \{1\}$, but $A \cap B \cap C = \emptyset$.

Related NCERT Content for Class 11 Maths Chapter 1

[Extra Questions \(HOTS\) for Sets](#)

[Revision Notes for Sets](#)

[Class 11 Maths Formulas Handbook](#)

[Class 11 Maths NCERT Book \(Download PDF\)](#)

Class 11 Mathematics Chapter 1 – Notes and Extra Questions

Along with these NCERT Solutions, students can also use the [Class 11 Mathematics Chapter 1 Extra Questions](#) and [Class 11 Mathematics Chapter 1 Revision Notes](#) for quick revision and extra practice.

Q1. How many exercises are there in Class 11 Maths Chapter 1 Sets as per the 2026-27 syllabus?

Six exercises (1.1-1.6) plus a Miscellaneous Exercise — 57 questions total.

Q2. Has Chapter 1 Sets been reduced in the rationalised NCERT textbook?

Yes — “Power Set” as a separate topic/question in Ex 1.3 was removed, along with some Ex 1.6 word problems and four Miscellaneous questions.

Q3. Is Sets an important chapter for CBSE Class 11 board exams?

Yes — typically short-answer/MCQ weightage, and its notation underpins Relations & Functions and Probability later.

Q4. What is the difference between a subset and a proper subset?

A is a subset of B if every element of A is in B; a proper subset additionally requires $A \neq B$.