Class 9 maths chapter revision checklist

Visual learning guide - Maths · Grade 9

Follow the models and 5 worked cases, then try 14 questions with explanations. Save the guide or worksheet for another day.

Start with the key idea

Build a chapter checklist from your current school syllabus, then record evidence of recall, method and reasoning for each chapter. This guide uses the CBSE 2026-27 Class IX mathematics topic map as a reference and supplies original short checks. It does not replace the full syllabus or establish mastery from one score.

1. Match the checklist to the current syllabus

Write the academic year, board, subject level and textbook edition at the top of your plan. A saved checklist from another year may omit a new topic or include work that your present course treats differently. Chapter numbers alone are a weak match because editions can change their ordering.

The linked CBSE 2026-27 Class IX mathematics document lists number systems; algebra, including sequences and progressions, identities and linear equations; coordinate geometry; plane geometry; mensuration; and statistics and probability. It includes paired linear-equation work and coordinate distance and midpoint work.

Use the official document and your teacher's chapter list to create the rows, rather than treating the selected questions below as complete chapter coverage. Record the exact chapter title beside each topic family so your revision follows the course you are actually studying.

Current CBSE chapter | Independent task / next action

Number System | Record a dated attempt, difficulty and next step

Introduction to Polynomials | Record a dated attempt, difficulty and next step

Sequences and Progressions | Record a dated attempt, difficulty and next step

Exploring Algebraic Identities | Record a dated attempt, difficulty and next step

Linear Equations in Two Variables | Record a dated attempt, difficulty and next step

Coordinate Geometry | Record a dated attempt, difficulty and next step

Introduction to Euclid's Geometry: Axioms and Postulates | Record a dated attempt, difficulty and next step

Lines and Angles | Record a dated attempt, difficulty and next step

Triangles - Congruence Theorems | Record a dated attempt, difficulty and next step

4-gons (Quadrilaterals) | Record a dated attempt, difficulty and next step

Circles | Record a dated attempt, difficulty and next step

Area and Perimeter | Record a dated attempt, difficulty and next step

Surface Area and Volume | Record a dated attempt, difficulty and next step

Statistics | Record a dated attempt, difficulty and next step

Introduction to Probability | Record a dated attempt, difficulty and next step

2. Give each chapter three evidence checks

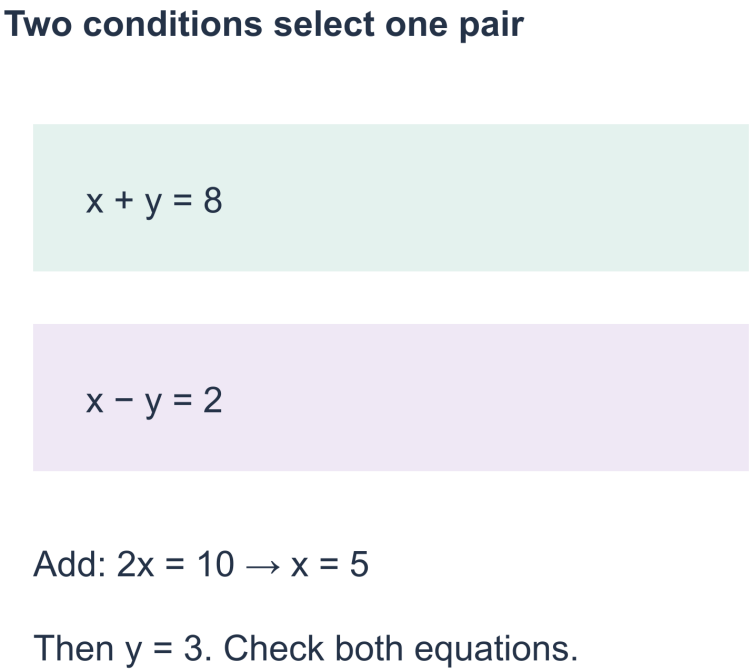
Use three columns: "recall without notes", "solve independently" and "explain or apply". A chapter is not secure simply because definitions sound familiar. You might recall an identity but still miss a coefficient when using it in an unfamiliar expression.

For each column, write a short dated example of what you did. "Expanded $(2x + 1)^2$ and checked at $x = 1$" is more informative than a green tick. Keep a question number or your own example so the evidence can be revisited.

A practical status system is not started, learning, needs another attempt and secure for now. These labels are planning aids, not diagnoses or permanent judgements. Change the status when a fresh attempt supplies new evidence.

3. Check number and algebra with contrasts

Contrast a terminating decimal with a non-terminating repeating decimal and an irrational example. Explain why a fraction of integers with a nonzero denominator is rational. Avoid judging rationality from whether a decimal happens to look long on a calculator display.



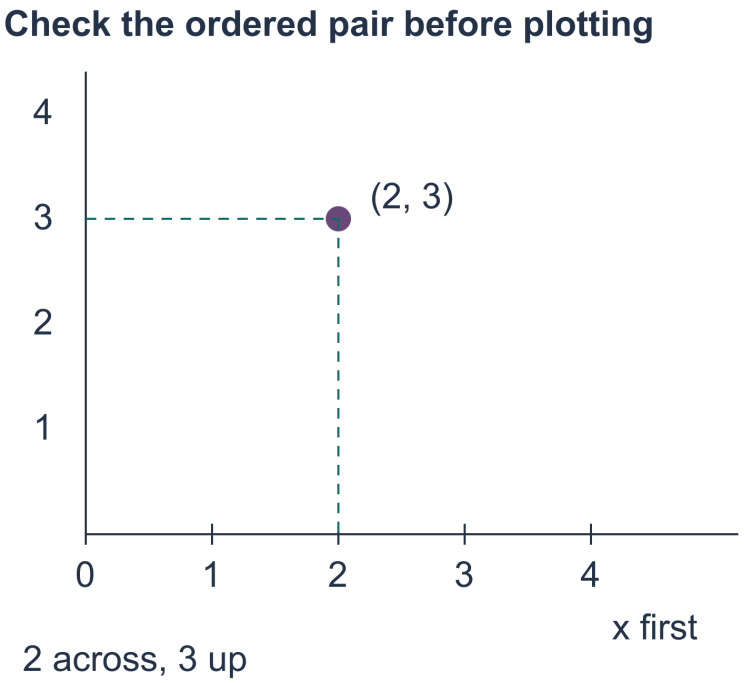
Adding x plus y equals eight and x minus y equals two gives x equals five, then y equals three; the pair is checked in both equations.

For algebra, practise expanding and reversing a pattern. Compare $(x + 3)^2$ with $x^2 + 9$ and explain the missing mixed term. Test one equation in two variables with an ordered pair, then solve a simple pair of equations to see how a second condition can narrow the possibilities.

Use original examples with manageable numbers first. If arithmetic hides the reasoning, reduce the numbers but keep the mathematical structure. Then return to a harder version so a correct easy answer is not mistaken for complete readiness.

4. Make geometry reasoning visible

On a coordinate grid, name x first and y second, label the scales and verify a plotted point. For points (1, 2) and (5, 2), the distance is four units because only the horizontal coordinate changes. Their midpoint is (3, 2).



A coordinate point at two across and three up is labelled two comma three, with dashed guides to both axes.

For a proof, list each equality with its reason. Congruence requires a valid condition and consistent correspondence; a shape that merely looks symmetric is not enough. For an angle problem, state the relationship that produces 180° or 360° before calculating.

Separate drawing accuracy from logical support. A sketch can help organise the givens, but a measured-looking angle is not evidence unless measurement is part of the question. Practise explaining why a conclusion survives a differently oriented diagram.

5. Check measurement and data with units and meaning

For mensuration, label what is being measured: an outside boundary, a covered surface or a filled space. A cuboid 5 cm by 4 cm by 3 cm has volume 60 cm^3; its surface area is 94 cm^2. The units keep the two tasks distinct.

For a data set, explain what the mean, median or mode describes rather than only calculating. In 2, 3, 3, 12, the mean is five and the median is three. The high value affects the mean differently from the middle positions.

For probability, define the outcomes and check whether they are equally likely. A fair die has six equally likely faces; two dice do not have equally likely sums. These interpretation checks are useful even when the numerical calculation is short.

6. Turn the checklist into a realistic week

Choose two or three specific gaps rather than scheduling "all algebra" in one sitting. A session can contain a brief recall attempt, one worked comparison, two independent questions and a short error note. Keep enough time to inspect reasoning, not only to finish a page count.

Revisit a missed skill after a gap using a fresh question. If the method now works independently, move the status forward. If the same error returns, choose a simpler representation or ask the teacher to look at the working. Repeating an identical copied solution may hide the difficulty.

Leave a flexible catch-up slot and retain some mixed practice. A chapter-by-chapter plan organises learning, while a mixed set checks whether you can select the method without a chapter heading giving it away. Both kinds of practice provide useful evidence.

5 worked examples with reasoning

1. A student marks identities secure after reading $(a + b)^2$. What is a stronger check?

1. Give a changed expression such as $(2x + 3)^2$.

2. Expand to $4x^2 + 12x + 9$ and explain the middle term.

3. Check at $x = 1$: both forms equal 25.

2. Solve $x + y = 8$ and $x - y = 2$.

1. Add the equations: $2x = 10$, so $x = 5$.

2. Substitute into $x + y = 8$ to obtain $y = 3$.

3. Check both original equations: $5 + 3 = 8$ and $5 - 3 = 2$.

3. Find the midpoint of A(1, 2) and B(5, 2).

1. The y-coordinate remains 2.

2. The halfway x-coordinate is $(1 + 5)/2 = 3$.

3. The midpoint is (3, 2), two units from each endpoint.

4. Find mean and median of 2, 3, 3, 12.

1. Mean = $20/4 = 5$.

2. The two middle values are both 3, so median = 3.

3. Explain why one large value lifts the mean without changing the middle values.

5. A learner cannot begin a proof without the model answer. How should the plan respond?

1. Mark the proof as needing an independent attempt, rather than complete.

2. Start by listing givens and matching vertices; practise one valid condition.

3. Return to a fresh diagram and check whether the reasons can be supplied without copying.

Use the ideas without looking at the notes

For every chapter, record the current syllabus match, a dated independent attempt and the next action. Treat the checklist as evidence for planning, not as a score that defines the learner.

Common questions

Can I use an old chapter checklist?

Compare its titles and scope with the current syllabus first. Do not assume the chapter numbering is unchanged.

Does this page cover every question type?

No. It supplies a planning framework and selected checks, not a complete course.

What counts as secure?

An independent explanation and fresh successful attempts provide better evidence than rereading or copying.

Should I revise one chapter or mix topics?

Use focused practice to repair a gap and mixed practice to check method selection.

What if I have not learned a listed topic yet?

Mark it not studied and follow the school sequence; do not count it as an error.

Connect your learning

- Practise linear-equation foundations
- Write triangle proofs with reasons
- Use active recall and fresh attempts

Ask about guided Maths learning if your child needs help explaining these ideas.

About this guide

Original explanations, examples, diagrams and practice by BananaLearn. The grade label indicates the intended learning level; this is not an official textbook extract or exam paper.

- CBSE Class IX Mathematics 2026-27 - current topic scope checked 28 October 2026

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Practice worksheet - Maths · Grade 9

Name: _____ Date: _____

Show your working. Answers and explanations follow on a separate page.

Try each task before opening its answer. Give an example or reason, not only a label.

Write an answer and your reason before opening the explanation. Check the reasoning as well as the final answer.

1. Is 0.75 rational? Explain using a fraction.

2. Is $\sqrt{2}$ rational?

3. Expand $(x + 4)^2$.

4. Factorise $x^2 - 25$.

5. Continue 4, 7, 10, 13 by two terms.

6. Does (2, 5) satisfy 3 x + y = 11?

7. Solve $x + y = 6$ and $x - y = 2$.

8. Find the distance between (1, 4) and (6, 4).

Practice continued

9. Find the midpoint of (2, 1) and (6, 5).

10. Two triangle angles are 42° and 68°. Find the third.

11. Do three matching angles prove triangles congruent?

12. Find volume of a cuboid 5 cm by 4 cm by 3 cm.

13. Find the median of 1, 4, 5, 8, 12.

14. Find P(an odd face) for a fair six-sided die.

Answers and explanations

Answer key - Maths · Grade 9

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1. Yes; 3/4.

It is a ratio of integers with nonzero denominator.

2. No.

It cannot be expressed as such a fraction.

3. $x^2 + 8x + 16$.

Include the two mixed products.

4. $(x - 5)(x + 5)$.

Use the difference of squares.

5. 16, 19.

The constant difference is three.

6. Yes.

$3 \times 2 + 5 = 11$.

7. x = 4, y = 2.

Add to get $2x = 8$, then substitute.

8. 5 units.

Only the horizontal coordinate changes.

9. (4, 3).

Average each coordinate separately.

10. 70°.

$180 - 42 - 68$.

11. No.

They can have different sizes.

12. 60 cm^3.

Multiply the three perpendicular lengths.

13. 5.

It is the middle value in the ordered list.

14. 1/2.

Three odd faces out of six.