



Free guide for parents

Glossary and command terms

What “justify”, “verify”, “investigate” and other MYP maths command terms ask your child to do, plus the MYP assessment words you’ll see on reports.



Command terms are the instruction words in MYP and DP maths questions, such as **justify**, **verify** and **investigate**. Each one tells your child what kind of answer is expected. “Justify” needs reasons, for example, while “state” needs only the answer.

Most commonly searched terms

Justify Give valid reasons or evidence that support your answer or rule. Criterion B	Verify Check that a rule or answer is correct, usually by testing new cases. Criterion B	Generalize Turn a pattern you have spotted into a rule that works for every case, often written with a letter such as n . Criterion B	Best-fit judgement How a teacher decides a final criterion level: by looking at the pattern of a student's work, not by averaging marks.
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Command terms in MYP maths

The criterion tag shows where each term most often appears. Explanations are our own plain-English versions. Your child's teacher may use the IB's exact wording.

Analyse Criterion D Break information into parts to find the structure or relationships in it. Example: Analyse the table to see how the cost changes as the number of tickets increases.	Calculate Criterion A Work out a numerical answer, showing the working. Example: Calculate the area of the triangle.
Comment Criterion D Give a judgement based on a result, such as whether it makes sense. Example: Comment on whether your model is realistic for 100 people.	Construct Criterion A Draw or build something accurately, often with a ruler, compass or software. Example: Construct a triangle with sides 5 cm, 6 cm and 7 cm.
Describe Criterion B Give a detailed account in words, without needing to explain why. Example: Describe the pattern in the number of squares.	Determine Criterion A Find the only possible answer. Example: Determine the value of x .
Draw Criterion C Show something accurately with a labelled diagram or graph. Example: Draw the graph of $y = 2x + 1$ for $-3 \leq x \leq 3$.	Estimate Criterion A Find an approximate value, usually by rounding first. Example: Estimate 49×21 by rounding to 50×20 .

Explain Criterion C

Give reasons or causes, not just the answer.

Example: Explain why the sum of two odd numbers is always even.

Find Criterion A

Get an answer, which may take several steps.

Example: Find the gradient of the line.

Generalize Criterion B

Turn a pattern you have spotted into a rule that works for every case, often written with a letter such as n .

Example: The number of matches for n squares is $3n + 1$.

Identify Criterion A

Pick out the answer from a set of possibilities or information.

Example: Identify the outlier in the data.

Interpret Criterion D

Explain what a result means in the real-life situation.

Example: The gradient of 12 means the plant grows 12 mm per week.

Investigate Criterion B

Explore a problem systematically to find out what happens and why.

Example: Investigate how the number of diagonals changes as a polygon gains sides.

Justify Criterion B

Give valid reasons or evidence that support your answer or rule.

Example: Justify why your rule works, using the structure of the pattern.

Label Criterion C

Add names or values to a diagram or graph.

Example: Label the axes and the point of intersection.

Measure Criterion A

Find a value using an instrument, such as a ruler or protractor.

Example: Measure angle ABC.

Organize Criterion B

Arrange information in a clear, logical way, such as a table.

Example: Organize your results in a table of n and the number of dots.

Plot Criterion C

Mark points accurately on a graph.

Example: Plot the data on a scatter graph.

Predict Criterion B

Say what will happen next, based on a pattern or model.

Example: Predict the number of tiles in the 20th design.

Prove Criterion B

Show with a logical argument that a statement is always true.

Example: Prove that the angles in a triangle add up to 180° .

Select Criterion A

Choose the best option or method from several.

Example: Select an appropriate method to solve the equation.

Show Criterion C

Give the steps that lead to a result you have been given.

Example: Show that the area is 24 cm^2 .

Sketch Criterion C

Draw a rough diagram or graph that shows the key features, not an exact plot.

Example: Sketch the graph of $y = x^2$, showing the vertex.

Solve Criterion A

Find the answer or answers, often to an equation.

Example: Solve $3x - 4 = 11$.

State Criterion A

Give a short answer without explanation.

Example: State the coordinates of the vertex.

Suggest Criterion D

Propose a possible answer or improvement.

Example: Suggest one way to make your model more accurate.

Test Criterion B

Try a rule with new values to check that it works.

Example: Test your rule for $n = 6$, then draw the 6th pattern to check.

Use Criterion A

Apply a given method, formula or piece of information.

Example: Use Pythagoras' theorem to find the missing side.

Verify Criterion B

Check that a rule or answer is correct, usually by testing new cases.

Example: Verify your rule for $n = 10$ by drawing or counting.

What our tutors see

The terms that cost students the most marks are **justify**, **verify** and **generalize** in Criterion B, and **explain** and **show** in Criterion C. Students often find the right pattern or answer, then stop before giving the reasons or the check that the higher levels need.

MYP assessment words, explained

ATL skills

Approaches to learning: the thinking, communication, social, self-management and research skills the MYP teaches in every subject.

Best-fit judgement

How a teacher decides a final criterion level: by looking at the pattern of a student's work, not by averaging marks.

Criterion (plural: criteria)

One of the four areas maths is assessed on: A Knowing and understanding, B Investigating patterns, C Communicating, D Applying mathematics in real-life contexts.

Criteria total

The four final criterion levels added together, out of 32. It is converted to an MYP grade from 1 to 7.

Extended mathematics

A more demanding MYP 4–5 course with extra topics and depth, often recommended before DP Analysis and Approaches at Higher Level.

Formative assessment

Practice tasks and feedback during a unit that help learning but don't count towards the final grade.

Global context

The real-world theme a unit is framed around, such as “Scientific and technical innovation”.

Grade boundaries

The ranges that convert a criteria total into an MYP grade. For example, 24–27 is a grade 6.

Key concept

A big idea a unit explores. The key concepts for MYP maths are form, logic and relationships.

Level descriptor

The description of what a student must show to reach a level band, for example 5–6, on a criterion.

Related concepts

Subject-specific ideas that deepen a unit, such as change, equivalence, pattern or quantity.

Standard mathematics

The core MYP 4–5 maths course, covering the framework every student needs.

Statement of inquiry

A sentence that combines a unit's key concept, related concepts and global context into the idea students explore.

Strand

One of the smaller parts of a criterion. Each strand describes one thing a student should show, such as “verify the general rule”.

Summative assessment

The end-of-unit tests and tasks that count towards the final criterion levels.

Task-specific clarification

A version of the level descriptors that a teacher rewrites for one particular task, showing exactly what each level looks like.

Next, see how these fit together in [How is Mathematics assessed in the MYP?](#), or try our [MYP grade calculator](#).



About the author

Rachel Bodily, M.Ed, is the founder of MYP Math Tutor. She taught at the International School of Amsterdam before starting MYP Math Tutor in 2022, and now leads a team of 25+ qualified IB teachers supporting 200+ students in 40+ countries.

[Meet the team](#)

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