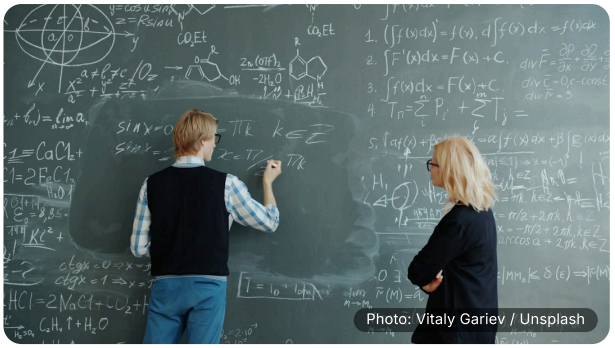
OpenAI maths releases prompt access concerns

LEVEL C1


Photo: Vitaly Gariev / Unsplash

I. WARM-UP

1. How do you feel about AI doing scientific research?
2. When should results be shared before full checks?
3. Who should control access to powerful AI tools?

II. KEY VOCABULARY

proprietary
Owned and controlled by a private company, not openly shared.

vet
To check something carefully to make sure it is sound or correct.

verify
To confirm that something is true or correct with evidence.

endorse
To publicly support or approve of something.

advisory
Giving advice or guidance, especially as an official group.

paradigm
A model or pattern for how something should be done or understood.

equitable
Fair and equal for all people or groups.

alienate
To make someone feel separated from or excluded from a group.

III. READING

OpenAI startled the maths world by releasing over 370 results in algebra, theoretical computer science and mathematical logic. Last month, it said its models solved a form of the Navier–Stokes problem, long linked to a $1m prize, boosting interest and scepticism.

Leaders in the field worry that frontier labs are testing the hardest problems on proprietary models that most mathematicians cannot access. The Institute for Advanced Study in Princeton, New Jersey, said it does not endorse this and warned that AI can produce arguments a human prompter may not understand or verify.

It argued that human understanding remains paramount and called for a new paradigm for responsible scholarly work. OpenAI is to work with the Institute for Advanced Study to give mathematicians a voice, but has not said it will stop using such problems.

Experts also question whether OpenAI is doing enough to vet results. NYU mathematician Tristan Buckmaster said prompts might leak ideas so the model can "take someone's work and then take it to completion".

An advisory board urged "equitable access" to models, warning that a two-tier system could let labs outrun and alienate the wider community.

Reading text adapted from reporting by **The Guardian***: "OpenAI's release of mathematical findings...". Original article linked at theenglishwire.com.*

IV. COMPREHENSION QUESTIONS

1. How many mathematical results did OpenAI release?
2. Which famous problem did OpenAI claim progress on, and what prize is linked to it?
3. Which institute raised concerns, and where is it based?
4. What collaboration is OpenAI set to pursue with mathematicians?
5. What risk did the advisory board warn about regarding access?

V. DISCUSSION

1. Should proprietary AI be used to pursue major proofs? Why or why not?
2. How much vetting is enough before releasing mathematical results?
3. What would equitable access to powerful models look like?
4. Who should be responsible if an AI-generated proof is wrong?

VI. GRAMMAR FOCUS

Be to / be set to for official arrangements

Use be + to + verb or be + set to + verb for scheduled or officially arranged actions (formal/news style). Form: am/is/are + to/set to + base verb.

"An advisory panel **is to publish** *guidelines on model access."*

"Workshops **are set to start** *for researchers in May."*

VII. GRAMMAR EXERCISE

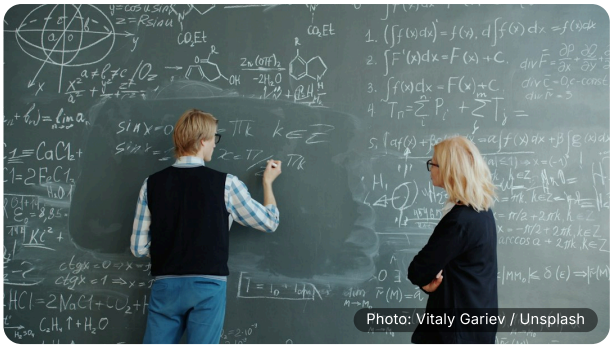
Complete each sentence with be to / be set to; either form is accepted.

1. According to the schedule, experts (present) ___ vetted results next month. _____
2. A public debate on AI proofs (take) ___ place next week. _____
3. A report on equitable access (appear) ___ in the spring. _____
4. Two experts (give) ___ a talk on proof checking this summer. _____
5. A university (launch) ___ a journal on AI proofs next year. _____

Teacher's Notes

TEACHERS ONLY

These notes are designed to help you get the most out of this lesson. Please do not share this page with students.


Photo: Vitaly Gariev / Unsplash

I. LESSON GUIDE

- Timing: 8–10 minutes warm-up, 10 minutes vocabulary, 12–15 minutes reading and comprehension, 8–10 minutes grammar, 12–15 minutes discussion.
- Pre-teach names and terms in context: Navier–Stokes, proprietary, vet, verify, advisory board, paradigm, equitable.
- Run the reading twice: first for gist (what happened), then for detail (who raised which concerns). Pair-check answers before a quick plenary.
- For discussion, keep the focus on access, verification and responsibility rather than personal beliefs about intelligence; allow students to give examples from their own field instead of pure maths.

II. DISCUSSION FACILITATION TIPS

1. Take a quick show of hands, then pair a supporter with a sceptic to swap reasons and counterpoints.
2. Elicit a class checklist (sources, replication, human review), then apply it to the OpenAI case.
3. Clarify "equitable" using the quote, then have groups design two concrete access rules.
4. Board brainstorm possible actors (OpenAI, institutes, journals, prompters), then ask for shared liability models.

III. EXTENSION ACTIVITIES

Debate: Two teams prepare 2-minute openings and a rebuttal: frontier labs vs the advisory board on “proprietary models in maths research.”

Writing: Write a 120-word policy note from the Institute for Advanced Study outlining two steps toward “equitable access.”

IV. ANSWER KEY OVERVIEW

Comprehension questions: short factual answers from the text.

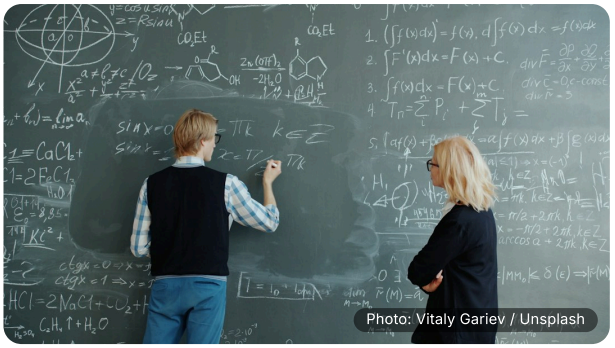
Grammar exercise: Be to / be set to for official arrangements

Discussion: open-ended. Accept any reasonable ideas supported by examples and reasoning.

Answer Key

TEACHERS ONLY

These answers are for teachers only. Please do not share this page with students.


Photo: Vitaly Gariev / Unsplash

IV. COMPREHENSION QUESTIONS

1. How many mathematical results did OpenAI release?
   More than 370.
2. Which famous problem did OpenAI claim progress on, and what prize is linked to it?
   The Navier–Stokes problem, linked to a $1m prize.
3. Which institute raised concerns, and where is it based?
   The Institute for Advanced Study in Princeton, New Jersey.
4. What collaboration is OpenAI set to pursue with mathematicians?
   It is to work with the Institute for Advanced Study to give mathematicians a voice.
5. What risk did the advisory board warn about regarding access?
   A two-tier system that could let labs outrun and alienate the wider community.

V. DISCUSSION

Open answers. Accept any reasonable ideas supported by examples and reasoning.

VI. GRAMMAR FOCUS

Key point: Use be + to + verb or be + set to + verb for scheduled or officially arranged actions (formal/news style). Form: am/is/are + to/set to + base verb. (Examples constructed.)

"An advisory panel **is to publish** *guidelines on model access."*

"Workshops **are set to start** *for researchers in May."*

VII. GRAMMAR EXERCISE

Complete each sentence with be to / be set to; either form is accepted.

1. According to the schedule, experts ___ vetted results next month. **are to present / are set to present**
2. A public debate on AI proofs ___ place next week. **is to take / is set to take**
3. A report on equitable access ___ in the spring. **is to appear / is set to appear**
4. Two experts ___ a talk on proof checking this summer. **are to give / are set to give**
5. A university ___ a journal on AI proofs next year. **is to launch / is set to launch**