



PROCEDURES FOR SUPERVISORS

85th WILLIAM LOWELL PUTNAM MATHEMATICAL COMPETITION

DECEMBER 7, 2024

The Putnam Competition consists of a session A and a session B that both take place on Saturday, Dec. 7, 2024. Competition times are based on time zone and are listed in the chart below.

Time Zone	Session A	Session B
Atlantic	10:00 a.m. — 1:00 p.m.	3:00 p.m. — 6:00 p.m.
Eastern	10:00 a.m. — 1:00 p.m.	3:00 p.m. — 6:00 p.m.
Central	9:00 a.m. — 12:00 noon	2:00 p.m. — 5:00 p.m.
Mountain	8:30 a.m. — 11:30 a.m.	1:30 p.m. — 4:30 p.m.
Pacific	8:00 a.m. — 11:00 a.m.	1:00 p.m. — 4:00 p.m.
Alaska-Hawaii	8:00 a.m. — 11:00 a.m.	1:00 p.m. — 4:00 p.m.

On December 7 at 8:00 a.m. EST, the problems will be distributed electronically to supervisors via the Putnam portal. After the competition, you must upload the students' solutions to the Putnam portal by December 9.

IMPORTANT INFORMATION FOR PUTNAM COMPETITION SUPERVISORS

- Eligibility: The Putnam Competition is open only to actively enrolled undergraduate students who have not yet received a bachelor's degree. No student may participate in the competition more than four times (not counting the unofficial 81st Putnam competition). Supervisors must confirm the eligibility of each participant who registers at their institution, approving them at the Putnam portal after they register.
- Student Registration: You will find a unique student registration link in your Putnam portal, which you must share with interested participants. This link automatically associates the student with the correct institution. There is no deadline for participant registration, but students must register online before the exam begins on Dec. 7 in order to receive their Putnam Identification Number (PIN).
- **New this year: We will release the exam problems just 2 hours before the exam begins.** You will be able to download the official competition problems from the Putnam portal after 8:00 a.m. EST on Dec. 7. Print the two single sheets of problems for each participant — one for Session A and another for Session B.
- It is critical that printing and duplicating be done in a secure environment. You must place the problem sheets immediately into envelopes, with Session A problems in a separate envelope from Session B problems, and keep them in a secure location. This is to ensure that the problems remain secure until the exam begins and, in particular, that session B problems remain secure until the afternoon session begins.
- Download and print all cover sheets for each participant from the Putnam portal. Distribute the cover sheets to participants, who will cover each of their solutions with the corresponding cover sheet. When participants hand in their submitted work, it is important that the pages are in order so that the cover sheet for each submitted solution appears on top of the corresponding solution. When the pages are later scanned by supervisors, the order of the pages dictates which pages are submitted for each problem (The labeling of the solution pages themselves serves only as a back-up, in case the scanning order is disturbed).
- Administer the competition in two sessions (A and B) on the same day, Dec. 7, 2024. Session start times vary by time zone and are listed on the first page of this guide.
- Provide plenty of unlined clean white 8.5-by-11 inch paper to each student. All submitted solutions must be written on this paper.
- Participants should assemble 10 minutes prior to each session. The exam room must be free from noise and other disturbances. You (or your responsible designee) must be present during the entirety of both sessions. If possible, a clock should be visible to the participants. Arrange for an exam room large enough so that no participant can see the papers of any other participant.

- Participants should bring their own writing implements. Pencils or pens with blue or black ink are permitted. Erasers and pencil sharpeners are also permitted, but other materials, such as paper not provided by the supervisor, books, calculators, computers, rulers, or compasses, are not permitted in the exam room.
- Mobile phones must be turned off and put away during each session.
- Participants must work independently on the problems. Participants may not receive any assistance during the competition. In particular, you may not provide any definitions or clarify any problem statements.
- Participants are identified by Putnam Identification Numbers (PINs), which they obtain by registering at the Putnam online platform. Participants must not write their name or the name of their institution on their solutions.
- Participants complete the header portion of each page they want to submit for grading. This consists of their PIN, the problem number (letter A or B followed by a number from 1 to 6), and the page number in the format "Page k of n", where n is the number of pages for the solution to that problem and k ranges from 1 to n. For example, the top of a page might look like this:

PIN 123456

Problem B4

Page 4 of 5

- Results will be announced in February 2025. The scores assigned by the graders are final, and no appeals will be considered.

INSTRUCTIONS FOR COMPETITION DAY

SESSION A

1. After 8:00 a.m. ET, download the exam problems for sessions A and B and print them in a secure setting, making a copy for each participant. Store securely the session B problems, and bring the session A problems to your exam room.
2. Provide an adequate supply of unlined clean white 8.5-by-11 inch paper for participants to use as solution sheets and scratch paper. Also distribute to each student the cover sheets for their solutions to problems from session A. One way to do this is to lay out all the cover sheets at the front of the room and have students come up to get theirs. If there are students whose cover sheets have not yet been printed due to last-minute registration, please allow them to complete the exam and then add the cover sheets when you have the opportunity to print them.

3. Make the following announcement:

“Please turn off and stow away your cell phone. All work is to be done on the paper that I have provided. Do not put solutions to two different problems on the same sheet of paper. Do not write on the reverse side of the paper. All work to justify a solution and all necessary steps of a proof should be presented. No collaboration or outside aid is permitted.

At the top of each page that you submit for grading, write your PIN, the problem number (the letter A or B followed by a number from 1 to 6), and the page number in the format “Page k of n ”, where n is the number of pages for the solution to that problem and $1 \leq k \leq n$. Each solution is numbered separately.”

4. Distribute the session A problems to the participants, problems side down, just before announcing that they may begin work.
5. Give the signal to start work on session A at the time indicated on the first page of this guide.
6. After exactly 3 hours, give the signal to stop work on session A.
7. Make the following announcement:

“Hand in the work you wish to have graded. Make certain that your PIN, the problem number, and the page number for that solution appear at the top of each page you submit. Do not include scratch paper or blank paper. In front of each solution that you wish to submit for grading, place the appropriate cover sheet. The order of pages is important. Do not take any Putnam Competition materials outside of the room.”

8. When the students have handed in their work, the students can be dismissed for their lunch break.

SESSION B

1. Distribute the session B cover sheets.
2. Just before session B begins, distribute the session B problems to the participants.
3. Remind participants to write, at the top of each page, their PIN, the problem number (the letter B followed by a number from 1 to 6), and the page number in the format "page k of n" with $1 \leq k \leq n$.
4. Give the signal to start work on session B at the time indicated on the first page of this guide.
5. After exactly 3 hours, give the signal to stop work on session B.
6. Make the following announcement:

"Hand in the work you wish to have graded in order of the problem numbers, and with the pages for each solution in their proper order. Make certain that your PIN, the problem number, and the page number for that solution appear at the top of each page you submit. Do not include scratch paper or blank paper. In front of each solution that you wish to submit for grading, place the appropriate cover sheet."
7. Congratulate the students for participating in the Putnam Competition, and dismiss them.
8. Collect the solutions to be scanned and uploaded to the Putnam online platform. Be careful to keep their submitted pages in order in preparation for scanning.

AFTER THE COMPETITION

1. To prepare the solutions for uploading, make certain that each submitted solution is preceded by the appropriate cover sheet. Do not include scratch paper, blank paper, or cover sheets associated with problems for which the student did not submit any work.
2. Keep the solution papers in your personal possession or in double-lock-and-key secure storage until they are scanned. We strongly recommend scanning solutions papers immediately after the exam to ensure exam security.
3. Scan the submitted solutions to generate a single pdf document for your institution, or, alternatively, several pdf documents for your institution, if the file size seems unwieldy. This can be done with the assistance of office staff on December 7, 8, or 9. It is recommended that you assign the scanned image a file name that begins 2024Putnam and continues with a few characters that identify your institution.
4. Submit your institution's solutions by uploading the pdf to the Putnam portal. The deadline for the upload is December 9. Supervisors must keep the original solutions on paper in a secure location for at least 2 months.
5. The results of the competition will be sent by email to participants and will be available to supervisors at the Putnam portal in mid-to-late February.

Thank you for serving as a Putnam Competition supervisor.