

2021 Computational and Algorithmic Thinking

Coordinator's Handbook – Paper

TABLE OF CONTENTS

| | |
|--|----|
| About the CAT | 1 |
| Date of the CAT – Tuesday 23 March–Thursday 25 March 2021 | 1 |
| Registering for the competition at https://competitions.amt.edu.au/admin/ | 1 |
| Important | 1 |
| Competition Guidelines | 2 |
| CAT package | 3 |
| Address label coding | 3 |
| Preparing for the competition | 4 |
| Competition Day | 5 |
| After the competition | 5 |
| Coordinator checklist (paper) | 6 |
| Instructions for supervisors (paper) | 7 |
| Before the Competition | 7 |
| When students are seated in the room | 7 |
| Starting the Competition | 8 |
| During the Competition | 8 |
| Finishing the Competition | 8 |
| Returning the answer sheets | 9 |
| Instructions for students (paper) | 10 |

ABOUT THE CAT

Computational and Algorithmic Thinking (CAT) focuses on the skills behind computer programming and algorithm design but does not require any specific knowledge of programming or programming languages. There are 9 questions participants need to complete in one hour. Please allow additional time for student registration and competition administration.

Date of the CAT - Tuesday 23 March-Thursday 25 March 2021

This year we are allowing a three-day window, to give you more flexible scheduling in your classes. While you can choose any time in this range, it's ideal to have your students sit CAT on the same day.

Sitting the CAT on an earlier date will not be possible. Supervisors will conduct the competition in a controlled environment according to the [Competition guidelines](#).

Register for the competition at

<https://competitions.amt.edu.au/admin/>

A teacher is a school administrator or educator responsible for conducting the competition. To register students, a teacher will need their registered username and password. If these are not known, a teacher can register themselves and this will be approved by the AMT. Teachers enter student numbers for the competition and pay the appropriate entry fees.

Important

To make sure the school details are correct on your certificates, please let us know if your school details or contact information have changed by emailing us at competitions@amt.edu.au.

COMPETITION GUIDELINES

SITTING THE COMPETITION ON AN EARLIER DATE IS NEVER PERMITTED. This would jeopardise the validity of scores from all schools.

SITTING THE CAT ON A LATER DATE IS PERMITTED when there are compelling reasons, but such sittings must be declared on the certification form. The late sitting should be as close as possible to the official date. Students will be eligible for awards, but the AMT reserves the right to disqualify such awards where there appears to be a breach of security.

Please notify supervising teachers of these rules:

- No student may sit more than one division of the competition.
- No student is to leave the room during the CAT unless accompanied by a supervisor. Students are to stay in the room until the CAT has concluded.
- Students are NOT permitted to supervise the CAT.
- Supervisors must collect all CAT papers and answer sheets. Papers can be returned to students a week after the CAT and if they want them returned they would need to write their name in the space provided on the front.

To maintain the integrity of the CAT and to identify outstanding students, the AMT reserves the right to re-examine students before deciding whether or not to grant official status to their score.

CAT PACKAGE

You will receive a CAT package through the mail that contains:

- CAT papers
- plastic envelope for return of answer sheets
- cardboard protector for return of answer sheets
- pink certification form
- mark sense answer sheets.

Check that you have received the correct number of CAT papers and answer sheets as per the label on the front of your parcel. See below for how to do this.

Store flat in a secure place until the day of the CAT.

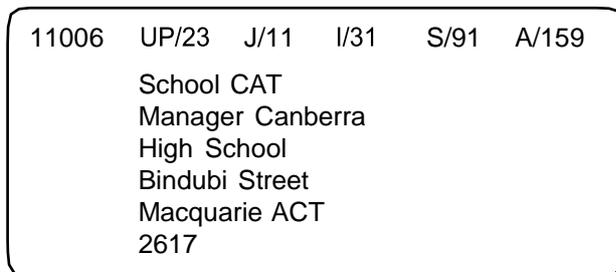
If you require extra answer sheets, you must get these from the AMT. The school receives one extra CAT paper in each division.

For every 200 entries the school receives three extra answer sheets.

Note: If you use (and submit) these extra answer sheets, AMT will charge you the standard entry fee for these extra answer sheets. We cannot process photocopied answer sheets or sheets from previous years.

Address label coding

Here's an example that shows the total number of entrants from your school and how they're coded onto the school address label:



Where: **11006** is the School Code (please quote this number in all communications)

UP/23 indicates 23 Upper Primary CAT Papers (22 entered + 1 extra)

J/11 indicates 11 Junior CAT Papers (10 entered + 1 extra)

I/31 indicates 31 Intermediate CAT Papers (30 entered + 1 extra)

S/91 indicates 91 Senior CAT Papers (90 entered + 1 extra)

A/159 indicates 159 Answer Sheets (156 papers + 3 extra)

PREPARING FOR THE COMPETITION

1. Before Tuesday 23 March 2021, complete planning and bookings to make sure the following will be available:
 - **Venue—please allow 75 minutes** (60 minutes working time)
 - **desks and chairs** for the students
 - **whiteboard/blackboard or overhead projector**
 - **clock**
 - **a supply of spare pencils** (preferably 2B), **erasers, scrap paper and calculators** (not an internet-connected calculator). Note that students must use a PENCIL when filling in details and answer sheets.
2. Supervisors needed for the CAT
 - one supervising teacher to every 40 students if the students are in one hall or room
 - one supervising teacher per classroom of 40 students or less if the students are in separate classrooms.
3. Complete the details on the [Instructions for students](#) for distribution to students and display on noticeboards and/or school communication apps.
4. Complete the details on the [Instructions for supervisors](#) for distribution to all supervisors. We recommend you hold a meeting with supervisors to familiarise them with the running of the CAT and the format of the answer sheets.
5. **Send reminder notices** a week prior to the CAT, advising students of the CAT date and reminding staff of the supervisor arrangements. Display the [Instructions for students](#) and answer sheet on the noticeboard on the same day.
6. **Check that you will have access**, early on the morning of the CAT, to the secure area where the CAT papers have been stored.
7. **Tell students** to bring pencils, erasers, rulers, calculators, scrap paper and printed language dictionaries (if needed).
8. Complete Answer Sheet Fields (School Use Only I and II)

- The use of these fields is optional, but useful in a large school. You can use either (or both) of these fields to identify your students.
- What is filled in here will appear in unobtrusive yet distinguishable characters in the bottom-right corner of the student’s individual letter.
- For example: A school may want to sort certificates into classes for easier distribution – perhaps 7A, 7B or 7C.
- A school may have students from different campuses sitting the CAT. You could designate one campus ‘A’ and instruct all those students to fill in oval A in School Use Only field II. Similarly, the other campus could be designated campus ‘B’ in School Use Only field II.
- Sample shown here is coded 7B

COMPETITION DAY

1. Remove the CAT papers from the secure storage.
2. Check that the number of CAT papers in each of the three divisions corresponds with the label on the front of your CAT parcel.
3. If you don't have enough CAT papers, photocopy the required extras. **Remember** that you must note any shortfall in CAT papers or any deviation from procedures on the pink certification form.
4. If the entrants are spread across different locations, organise the CAT papers and answer sheets into the correct bundle sizes for the various room supervisors.
5. Distribute the instructions for the CAT to all supervisors.
6. Complete the pink certification form.

AFTER THE COMPETITION

1. Return completed answer sheets.
 - Check that students have correctly coded their school year, for example, '7' for Year 7, '8' for Year 8 etc.
 - Check that the pink certification form has been correctly completed.
 - Place all answer sheets and the completed pink certification form into the plastic envelope(s) with the cardboard protector (no paper clips or rubber bands) so that the school name is on the top-left side of the bundle. This ensures that the answer sheets arrive undamaged and feed correctly into the optical scanner.
 - If your school is returning several envelopes of answer sheets, please make sure they are dispatched as ONE consignment to reduce the risk of an envelope getting lost in the mail.
 - The envelope of answer sheets should be dispatched to the AMT within 24 hours. You may like to use Express Post or a courier.
 - The AMT will not accept responsibility for the marking of answer sheets that are not dispatched promptly. Please notify the AMT if this is not possible.

Remember to include the completed pink certification form with your answer sheets.

The following FOUR pages are for you to print or photocopy, fill in the relevant details and distribute to your classroom supervisors.

COORDINATOR CHECKLIST (PAPER)

- Preliminary arrangements/bookings made
 - supervisors
 - location
 - time
 - desks and chairs
 - supply of B or 2B pencils and scrap paper

| Supervisor's name | Class | Location | Time |
|-------------------|-------|----------|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

- INSTRUCTIONS FOR STUDENTS distributed or displayed
- INSTRUCTIONS FOR SUPERVISORS distributed
- Certification form correctly completed
- Answer sheets and pink certification form mailed to the AMT (date, time and location)

-
- CAT papers returned to students one week after the date of the CAT

INSTRUCTIONS FOR SUPERVISORS (PAPER)

Supervisor's name

Class

Location

Time

Before the competition

1. Collect the following from the school CAT Manager:
 - CAT papers
 - answer sheets
 - supply of spare B or 2B pencils, erasers and scrap paper.
2. Arrange the desks so that no student can see the answers of another student in the same division.
3. Place the CAT papers and answer sheets on the desks.

When students are seated in the room

1. Ask students NOT to open the CAT papers. Check that:
 - students' mobile phones are stored outside the room
 - no student has brought aids other than calculators and language dictionaries (check dictionaries for loose pages or insertions)
 - all students have a B or 2B pencil, eraser and scrap paper
 - all students understand the need to work under examination conditions.
2. We suggest that all students complete the details on their answer sheets simultaneously:
 - date
 - name of the school
 - student's name
 - student's school year
 - gender
 - date of birth (for birthdates on the first nine days of the month, the zero oval in the left-hand column should be filled in, then the birth date in the right-hand column).
3. Tell students that the answer sheets are scanned and that certificates are printed with each student's name, school and school year AS ENTERED on the answer sheet.
4. If the school year is not completed correctly, the paper cannot be marked.
5. Ask students to check that they have the correct CAT paper for their division: Upper Primary Years 5–6, Junior Years 7–8, Intermediate Years 9–10, Senior Years 11–12. (Note, these are Australian school years.)
6. Ask students to record their name on the front of the CAT paper if they want their paper returned to them after the CAT.

Starting the Competition

1. Read out the following instructions and make sure that students understand them:
 - Do not open the CAT paper until told to do so.
 - Maintain silence at all times.
 - Do not bring mobile phones into the room.
 - You may use calculators and printed language dictionaries.
 - You may NOT borrow equipment without a supervisor's permission.
 - There are 9 questions. Questions 1–6 are multiple-choice with five possible answers given.
 - Questions 7–9 (each with three parts) need a numeric answer from 0–999 and are worth 2 points each. Attempt all questions.
 - Penalties do not apply.
 - You are allowed working time of one hour (60 minutes). There is no extra reading time.
 - This is a competition not a test; do not expect to answer all questions.
 - Diagrams are NOT drawn to scale. They are intended only as aids.
 - The questions have been thoroughly checked. Each question stands as written. No further explanation of questions can be given.
 - You must not leave your seat. If you have any other questions or problems, please raise your hand and wait for a supervisor.
 - If you wish to leave the room a supervisor must accompany you.
 - Record all your answers on the answer sheet.
 - Use B or 2B lead pencils only. Ball point and ink pen markings may not activate the optical scanner.
 - Do not make any other marks on the answer sheet as these may make the sheet unreadable.
 - If you make an error, use a plastic eraser to completely remove all lead marks and smudges.
 - Check that the number of the answer you are filling in is the same as the number of the question you are answering. This is particularly important if you decide to leave a question blank.
 - To maintain the integrity of the CAT and to identify outstanding students, the AMT reserves the right to re-examine students before deciding whether to grant official status to their score.
2. Start the CAT and inform students the finishing time.

During the Competition

1. Please make sure that examination conditions are maintained and the rules set out below are followed.
 - If a student needs to leave the room, a supervisor must accompany the student otherwise the student will not be re-admitted.
 - Late students may be admitted up to 30 minutes after the CAT has commenced but no extra time is allowed.
 - No student may leave early.
2. Complete the following details:

| Australian year level | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTAL |
|-----------------------|---|---|---|---|---|----|----|----|-------|
| Number of students | | | | | | | | | |

Finishing the Competition

1. Ask students to stop writing and sit quietly until all the CAT papers are collected.
2. Ask students to hold their answer sheets so that the side showing the school name is facing up, and the cut-off corner is away from them. Collect the answer sheets, checking that the student details are filled in correctly, especially the school year, school name and student's last name, and that lead pencil has been used. Also check that the students have coded their answers onto

the other side of the answer sheet.

Returning the answer sheets

1. Return this form and the students' answer sheets to the your school's CAT coordinator immediately after the competition.
2. Check that you have filled in the number of entries (above) for the group you supervised and that all the answer sheets have the school name in the top-left corner. The cut-off corners in the bottom right of the page will then line up correctly.

INSTRUCTIONS FOR STUDENTS (PAPER)

Class

Location

Time

- Do not open the CAT paper until told to do so.
- Maintain silence at all times.
- Do not bring mobile phones into the room.
- You may use calculators and printed language dictionaries.
- You may NOT borrow equipment without a supervisor's permission.
- There are 9 questions. Questions 1–6 are multiple-choice with five possible answers given. Questions 7–9 (each with three parts) require a three-digit answer. Attempt all questions.
- Penalties do not apply.
- You are allowed working time of one hour (60 minutes). There is no extra reading time.
- This is a competition not a test; do not expect to answer all questions.
- Diagrams are NOT drawn to scale. They are intended only as aids.
- The questions have been thoroughly checked. Each question stands as written. No further explanation of questions can be provided.
- You must not leave your seat. If you have any other questions or problems, please raise your hand and wait for a supervisor.
- If you wish to leave the room a supervisor must accompany you.
- Record all your answers on the answer sheet provided.
- Use B or 2B lead pencils only. Ball point and ink pen markings may not activate the optical scanner.
- Do not make any other marks on the answer sheet as these may make the sheet unreadable.
- If you make an error, use a plastic eraser to completely remove all lead marks and smudges.
- Check that the number of the answer you are filling in is the same as the number of the question you are answering. This is particularly important if you decide to leave a question blank.
- To ensure the integrity of the CAT and to identify outstanding students, the AMT reserves the right to re-examine students before deciding whether to grant official status to their score.