

2016 Ciphering Time Trials Frequently Asked Questions

Q: What is the format of the contest?

A: The contest consists of ten rounds in which students have three minutes to answer three free-response questions covering topics from arithmetic to calculus. The Ciphering Time Trials emphasizes self-assessment and prioritization, as students must decide which questions to attempt in each round based upon the topics covered and levels of difficulty.

Q: How many people may take the test?

A: Your school's registration allows any number of students from your school to participate, but each student must work individually and turn in a separate answer sheet, and all official participants from your school must test simultaneously.

Q: With subjects like calculus on the tests, won't younger students be at a disadvantage?

A: No; awards are given in five divisions (middle school and 9th-, 10th-, 11th-, and 12th-grade), so that freshmen are only compared with other freshmen, etc.

Q: How long will the test take?

A: The test itself will probably take approximately 45 minutes of your students' time, considering the fact that there is some downtime between the ten rounds of the contest. As the coach, you will need to familiarize yourself with the materials, make copies, and get students situated prior to testing, then score the tests and mail the scored answer sheets back to us after testing. Depending on how many of your students take the test, you might need to spend several hours to enable your school to participate.

Q: When can I administer the test?

A: To officially participate and be eligible for awards, a student must take the test on **Thursday, December 8th, 2016**. You may administer the test at whatever time you like on that date, giving you the flexibility to test at whatever time is convenient for the majority of your team. If you administer the test more than once on that date, only students who participated in the first administration will be eligible for awards. The test should not be shown or administered to any students (even unofficial participants) before the test date, to ensure that test information does not reach any official participants.

Q: Why do I have to administer the test on a particular day?

A: Having taken a test, many students discuss interesting problems with their peers via the Internet. If some schools test before others, students who have not yet taken the test may be exposed to the test material, altering their scores and skewing the results of the contest. To avoid this, we ask that you administer the test on the date specified. In the event of a known schedule conflict (e.g. Finals Week), we do allow schools to administer a test up to one week in advance of the official test date. In the event of an unexpected school closure (often weather-related), you may administer a test up to one week late. Please notify us if you need to test on an alternate date.

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Q: What tools and materials can students use on the test?

A: Students will need a writing implement, test, and answer sheet, and may use blank scratch paper. Students for whom English is not their best language may use a non-electronic foreign-language/English dictionary. No other tools may be used, which specifically excludes all types of calculators, computers, and cell phones.

Q: What strategies might students find useful on the contest?

A: Self-assessment is the most essential skill for this contest. Because competitors have just three minutes for each round, they need to make sure they focus on the problems they are most comfortable with based on their topics or difficulty levels. Often, double-checking work on a problem a student is comfortable with will be a better strategy than moving on to a problem that is more difficult or less familiar.

Q: What are “exact, complete, and simplified” answers?

A: “Exact” means that there are no approximations, which typically means that answers are left as fractions in terms of π , e , i , and radicals. “Complete” means that all correct answers are part of a student’s answer; i.e. supplying one root of a quadratic would not be sufficient. “Simplified” includes things such as completely reducing all fractional quantities and expressing irrational quantities in simplest radical form, but there are sometimes answers with several comparably simple expressions. We do not consider answers such as $\frac{3}{\sqrt{2}}$ to be simplified, because it is inconvenient to have irrational

numbers in the denominators of fractions when discussing or thinking about numerical quantities. We do not consider answers such as $2(1 + \sqrt{2})$ to be simplified, because an operation remains that can be performed exactly.

Q: Why do I receive the answer key and solution guide before the contest?

A: Because of the large number of individual participants, we ask that each coach score their team's answer sheets before submitting them. To do this, you need the answer key as soon as the test is over. The solution guide is provided at the same time so that participants can learn how to do problems they missed while the test is still fresh in their minds. The answers and solutions should not be made available to your students until after you have collected their answer sheets.

Q: Which answer sheets should I submit?

A: At a minimum, you should e-mail us the name of your highest-scoring student so that they can receive a best-in-school-certificate. To maximize your chance of receiving a school award, you should send us your highest score in each grade 9-12. Scores for previous years’ award winners can be found on our website. Although this is not necessarily a predictor of this year’s scores, it may help guide you in deciding which of your answer sheets to submit.

Q: I have more questions; where can I get more information?

A: Tom Clymer, our director of academic competitions, would be happy to answer your questions. He can be reached at clymer@natassessment.com, or at (206) 650-6411.