



Calculator Applications

These directions expand upon but do not replace the information in the UIL Constitution and Contest Rules. The contest director should read Section 924 of the Constitution, then read these guidelines for additional details.

Before the meet

ROOM

Secure the best room you can find that is large enough for the number of contestants expected. It is very important to have a room with tables or desks with writing areas that are large, at least 18 x 24 inches. Using two rooms with suitable desks and conducting the contest simultaneously in both is preferable to using one unsuitable room.

MATERIALS AND EQUIPMENT

The contest director will provide the following.

- A copy of the rules from the *Constitution and Contest Rules*
- Clean scratch paper for use by the contestants
- Red markers and calculators for grading
- Accurate clock for timing, preferably one that contestants can see during the contest
- Confirm, before the day of the event, that the spring meet director has the packet of spare answer keys, to be opened in case the answer keys are missing from the packet. If no spare keys can be located, ask the director to contact the League office.
- (DISTRICT) One 8 1/2 x 11 envelope per school (8-12)

CONTEST PACKET

The League office will provide the following.

- Instructions
- Copies of the tests and answer keys in a sealed envelope (Do not open the district test packet until just prior to the beginning of the contest. The district or regional director may schedule a specific time and place for contest directors to pick up these packets on the day of the event.)
- Contest Evaluation Form
- (REGION) Regional awards order form
- (REGION) State Meet information cards for state meet qualifiers (11)

PERSONNEL

- Contest director. A coach of a contestant may serve as contest director.
- Assistant contest director. (REGION) The UIL staff may appoint an assistant to the contest director

from one of the high school campuses in the region, if requested. This individual will serve as a support person for the contest director and may be on hand before, during and after the meet to answer questions which may arise concerning the contest. Coaches of competitors may serve as assistants to the director.

- One assistant. This person may be a coach of a contestant.
- Head grader. The contest director shall designate a head grader who will assist the contest director. The final authority rests with the contest director.
- Graders. Almost certainly the best graders will be coaches of the contestants, and we encourage using their skill and experience to ensure accurate and efficient grading of the test papers. Coaches have, upon request, the privilege of grading.

TIME

- Allot one hour for the contest: up to 20 minutes for roll call, opening remarks and checking the test and 30 minutes for the test. Stay on schedule as some students may need to go to other events.
- Arrange for and announce, during the opening remarks and if possible in the program, the time and place of a 15 minute verification period to be held prior to the announcement of official results.

CONTEST ROSTER & RESULTS SHEET

(DISTRICT & REGION) Your meet director will provide to you a contest roster, generated from the UIL Spring Meet Entry System. It will list the contestants and alternates from each school. You will need to assign contestant numbers, and may use the numbers beside each contestant's name on the roster. You should record scores and/or results on the Contest Roster and Results Form to give to the meet director, who will then enter the results/scores into the Spring Meet Online Entry System.

SUBSTITUTIONS

(DISTRICT) Schools may replace contestants on the official district meet roster with substitutes so long as the substitutes present the contest directors with the appropriate documentation.

- *Students whose names were never entered into the online entry system* may substitute so long as they provide the contest director before the contest begins with a substitute eligibility form (found in the Academic Coordinator's Manual) or a letter signed by a designated school official certifying the student's eligibility.
- *Students whose names were entered into the online entry system and hence certified as eligible* are eligible to substitute for a contestant so long as they provide the contest director with written notification (either the substitute form or a letter) signed by the event coach or representative from the contestant's school. Eligibility is already certified. Therefore, written notification is for the convenience of the contest director who may not have a copy of the other contest rosters.

At the conclusion of the meet, submit the substitution forms/letters to the spring meet district director to be filed with the school's original entry (see C&CR, Section 902 (g) (B)).

(REGION) If a member of a school's team cannot compete, only one substitution may be made. If a team needs more than one substitution, the alternate team will compete. The substitute must submit to the contest director a letter or form (such as the sample form found in the appendix) signed by a designated administrator to certify eligibility. Substitution forms should be submitted to the regional director prior to the contest or to the contest director during roll call. Do not make a substitution for an individual contestant who is not a member of a team.

TEAM COMPETITION

(DISTRICT) Schools have the option of entering either three or four competitors at the district level. While all four competitors may compete for individual honors, only the top three scores for each school will count in team competition except in the case of a tie (see page 24). A team must have three contestants compete in order to qualify for the team competition. Team members who qualify to regional will compete for both team and individual honors at that level. All four members of the winning team will advance to the next higher meet, and the top second place overall team (wildcard) in the region will advance to regional competition.

(REGION) A team must have three contestants to qualify for the team competition. A person who advances to this level of competition also qualifies for individual ranking and medals. Do not exclude them.



ALL COMMERCIALY available calculators are permitted as long as they do not require auxiliary electric power and as long as they are not modified. It is the responsibility of contestants to present to verifiers calculators cleared of all program-mable memory and numerical storage registers. Failure to clear programs will result in disqualification of that violating calculator, which may not be replaced. Clearable programs include but are not limited to program steps, equations, functions that can be cleared, applications, programs and executable items stores in archive locations. Contestants with no qualified calculators after verification will be disqualified.

ALTERNATES (REGION)

Alternates may compete only in the absence of an individual who won first, second or third place in the same district competition. Contest directors should delay calling for alternates until immediately prior to the beginning of the contest.

SORTING ENVELOPES

(DISTRICT) Provide and label a large (8 1/2 x 11) envelope for each school entered in the district meet. Write the name of the school and contest on the top of the envelopes. After the verification period, place contestants' tests and keys in the appropriate envelope to be returned return to each school no sooner than Saturday of the respective district week.

During the meet

1. Seat the contestants sparsely around the room, separating contestants from the same school.
2. Read aloud the following statements: "Coaches, contest directors and contestants are responsible for maintaining confidentiality of contest material. Transfer of information relative to the test shall be considered a violation of the academic spring meet code and subject to penalties as outlined in Section 700 of the C&CR. Any device that makes audible sound must be turned off."
3. Open the contest packet. Ask the coaches to help check every page of every test to make sure that no test is defective.
4. Call roll.
5. Have all contestants double check that their watches are not set to go off during the testing period.
6. Prior to the contest, verifiers shall verify that contestants clear calculators. Failure to clear programs will result in disqualification of that violating calculator, which may not be replaced. Clearable programs include but are not limited to program steps, equations, functions that can be cleared, applications, programs and executable items stored in archived locations. Contestants with no qualified calculators after verification will be disqualified.
7. Assign a number to each contestant using the contest roster. Mark this code number on the test and distribute the tests to the contestants. Give each contestant a sheet of scratch paper, if requested.
8. Except at State Meet, the following summary of the rules shall be read orally to the contestants:

Summary of Rules

- (a) You may use any silent, hand-held calculator that does not require auxiliary electric power. Your calculator data storage memory and all clearable program memory must be cleared. You may not use prerecorded programs during the contest but you are allowed to hand-enter programs and store numbers after the contest begins.
- (b) You may write on the test paper or on the scratch paper provided, but only the answer should be written in the answer space. You may erase or mark out an answer previously written, provided you write the revised answer within the answer space and clearly indicate the answer you wish graded.
- (c) This is a 30-minute contest. No time warnings will be given. Remain in your seat throughout the contest period.
- (d) No talking or distracting noises will be permitted. Students may use timing devices as long as no audible signals are emitted by the devices during the contest. Make sure that your watch is not set to go off during the testing period.
- (e) When the end of the contest period is indicated, you must cease calculator operations. After the signal is given you may, however, write down one number displayed on your calculator.
- (f) Answers may be written in decimal or in powers of 10 notation of the form, 1.23×10^{-6} . Except in integer, dollar sign, and certain stated problems, answers should be written with three significant digits only, with plus or minus one unit error in the third significant digit permitted. Integer problems require answers written as an integer and no error is permitted. Dollar sign problems should be answered to the exact cent in fixed notation, but plus or minus one cent error is permitted. Stated problems using inexact numbers require use of the method of least significant digits. Problems requiring the method of least significant digits are indicated by "sd" in the answer blank. Plus or minus one unit error in the last significant digit is permitted. The test cover sheet illustrates how answers should be written.
- (g) All problems through the last problem completed or attempted will be graded. A problem is considered to have been attempted if any mark or erasure appears in the answer space for that problem. Scoring is plus five points for correct answers and minus two points for incorrect, skipped, or illegible answers. Stated problems involving inexact numbers that are answered correctly but with the incorrect number of significant digits are awarded plus three points, provided at least two significant digits are indicated and the more precise answer rounds exactly to the lesser precise answer.

9. Sit in view of the contestants, give the contestants permission to turn on their calculators and begin the contest. During the contest, remain silent and do not move about. It is very important that the contestants have a quiet setting for the contest.
10. Terminate the contest at the end of exactly 30 minutes, allowing contestants to write one number that is on the calculator (but not transcribe answers written elsewhere on the test.) Collect the papers and retire to a private room for grading.

Grading the contest

1. Coaches not helping with the grading process may not enter the grading room.
2. Ask coaches to disqualify themselves in scoring their own contestant's papers, if they recognize handwriting.
3. Score each paper independently twice, and score papers contending to place among the top six a third time. Record the score on the outside of the each paper and have the grader initial it.
4. Begin grading a paper by marking a line after the last problem attempted. Check the next page to make sure that the contestant did not attempt further problems. Any mark in the answer blank, including erased marks, constitutes an attempt. Any erasure or markover (without a second answer) in the answer blank is considered to be incorrect, even if the number can be read and is correct. Students forego their right to consideration of their answer when they erase or mark out an answer.
5. The UIL C&CR and the covers of the tests contain detailed information about how answers must be written. Make sure all graders are familiar with these rules.
6. Mark the first grading to the right of the answers, next to the right margin of the paper. Use X for a wrong answer, no mark for a correct answer, and -2 for an error in significant digits. In the second grading, cover the X's from the first grading to ensure independent grading. This time mark an X above the problem number by the left margin.
7. The first grader should compute the final score according to the formula: $(5 \times \text{number attempted}) - (7 \times \text{number wrong}) - (2 \times \text{errors in significant digits})$, then write the score on the front of the test and place his/her initials next to the score. The second grader should compute the score according to the same formula, but also check that the two gradings agree in every detail. Record and initial the second score, and have the two graders work out any disagreement.
8. When doubting the legibility of a numeral or disagreement arises with another grader as to the legibility of a numeral, resolve it in the following manner. In a piece of paper, tear a small hole large enough to show the numeral without anything else. Using this as a mask, show the numeral to three other graders who do not know what the numeral is supposed to be. If two or more agree on what the number looks like, then that is what it is. If no two agree, then the numeral is declared illegible, and the answer is counted wrong. (The standards in the "x10" in scientific notation are lower since this is a standard format.) All papers contending to place should be scored a third time, this time with the X's being placed over the problem number next to the "=" sign.
9. In the case of an error on the answer key of an objectively-scored contest, graders should notify the UIL State Office of the nature of the error and/or contact the respective state contest director to seek clarification. Papers should be judged on correctness rather than on an incorrect answer given in the key.

DETERMINING PLACES.

- Individual competition. First place goes to the contestant making the highest score; second place to the contestant making the next highest; third place to the contestant making the next highest; etc.
- Team competition. For schools that enter four contestants, only the top three scores from among those contestants count toward the team score. Team scores and ranks are calculated when results are entered into the online system from the Roster and Results Form. The team with the highest total will be declared the winner of the team competition, and all four members of the team will advance to the next level competition. Declare the team with the second highest total score the alternate team.

TIES

- Individual competition. When determining first or second place, if more than one contestant has an identical raw score, give the higher place to the contestant gaining the most points on stated and geometric problems. Award students five points for each correct answer, three points for significant digit problems with an incorrect number of significant digits, and no points for wrong answers. A tie exists if more than one contestant has the same number of points on stated and geometric problems. In the case of a tie for first place, award no second place. In the case of a tie for second place, award no third place. In determining third place, if more than one contestant has the same raw score, use the same tie breaking procedure used for first and second place.

ENTER ALL SCORES INTO ONLINE SYSTEM!

Enter the scores of all contestants into the UIL Spring Meet Entry System — not just the top six. All scores are needed to determine team champions. The UIL strongly urges meet officials to enter unofficial results into the online system prior to verification.

INDIVIDUAL POINTS

1st place.....	15
2nd place.....	12
3rd place.....	10
4th place.....	8
5th place.....	6
6th place.....	4

TEAM POINTS

1 ST Place.....	10
2 ND Place.....	5

Individual school maximum
points = 37

CALCULATOR Applications team members also qualify to compete for individual awards at all levels.



WILD CARD.

Each region's highest scoring second place team may advance to the regional academic meet. In the event of a tie, all teams involved in the tie will advance.

IN ORDER to be eligible as a wild card representative, district results must be received by the regional director no later than 5 p.m. on the Monday following the final district academic week.

Failure to meet the deadline or to submit correct scores disqualifies the district from advancing teams as wild card representatives. The highest-scoring second place team from the regional meets may advance to the Academic State Meet.

- Team Competition. If at the district or regional meet two or more teams vying for first place have the same team score, first place shall be awarded to the team with the highest score of the fourth-place team member. Should two or more contestants who are the fourth-place team member have the same score, then a team tie will be declared and all teams involved in the tie shall advance. A team that does not contain a fourth member forfeits the right to participate in the tiebreaker. At the State Meet, no tie breaking procedure will be used for teams in any place; if two first place awards are made based on a declared tie, there will be no second place, etc.

After the meet

VERIFICATION PERIOD

Allow the contestants and coaches a time period not to exceed 15 minutes to look at the contestants' test/answer sheets. The contest director should make corrections to any errors found in scoring. Resolve questions at this time. Any interested parties may contact the state director to inquire about an answer, at their own expense. Ask students to place their papers in their school's sorting envelopes. Pick up all tests and answer sheets so that none remain with the contestant or coach. Contestants and coaches not present at the verification period forfeit their opportunity to ask questions.

ANNOUNCING OFFICIAL WINNERS

- Individual competition. After resolving all questions, the contest director should announce, as official results, the name and the school of each contestant who places first through sixth. Do not announce other names or scores. These results, once announced as official, shall be final.
- Team competition. While the interested parties are gathered, after examining team scores and announcing individual winners, announce the winner and the alternate of the team competition. Announce the name of the team's school, team members and total score for the team winner and alternate team. The results, once announced as official, shall be final.

QUALIFICATIONS TO REGIONAL (DISTRICT)

Contestants can qualify to regional as first, second or third place individual winners or members of the winning team or wild card team. All who qualify to regional will compete for individual honors.

RETURNING PAPERS

(DISTRICT) If results are final and all test questions resolved, entries may be returned no sooner than the end of the contest on the Saturday of the respective district week.

(REGION) If all questions are resolved and if the meet is held on Saturday, the test, answer keys and answer sheets should be returned to the contestants the day of the meet.

REPORT TO DIRECTOR

(DISTRICT) Individual contest directors shall give the contest roster/results form and sorting envelopes to the district director immediately after the contest. The district meet director is responsible for entering results into the UIL Spring Meet Online Entry System. District results must be submitted into the online system and made available for public review by 5 p.m. on the Monday following the second district week.

(REGION) Individual contest directors shall give the contest roster/results form and sorting envelopes to the regional director immediately after the contest. The regional meet director is responsible for entering results into the UIL Spring Meet Online Entry System and making them available for public review by 5 p.m. of the Monday following the regional meet. Regional directors shall also provide a list of contestant absentees if alternates were not present to take these individuals' places.

MAILING RESULTS

Mailing full meet results to participating schools is optional since results will be posted online.

EXTRA CONTEST MATERIALS

(DISTRICT) Destroy all extra materials on the Monday following the second district week.

(REGION) Destroy all extra materials on the Monday following the regional meet.