

A Periodic Rallye

Preliminary Score Sheet SS

(The other score sheet is PT)

Atomic Number: _____

Class: _____

Vehicle: _____

SIGN SEARCH TABLE: S=match left of WORD; R=match right of WORD; X= match inside of WORD.

Element	RI	Street-name WORD	Letter Count	Chirality
Americium				
Argon				
Arsenic				
Arsenic				
Barium				
Barium				
Barium				
Boron				
Boron				
Bromine				
Californium				
Californium				
Californium				
Cesium				
Cobalt				
Fermium				
Fermium				
Francium				
Gold				
Lanthanum				
Lanthanum				
Manganese				
Mercury				
Mercury				
Mercury				
Mercury				
Platinum				
Strontium				
Tellurium				
Terbium				
Terbium				
Terbium				
Tin				
Tin				
Titanium				
Vanadium				

How did you hear about this rallye?

Want to help create a rallye? _____

CPs (Rallye Worker use Only)		
1.	2.	3.
4.	5.	6.
7.	8.	9.
10.	11.	12.

Scoring (Rallye Worker use Only):
SS
CMs
CPs
Total

Tie Breakers:

1. What is the largest number of letters matched by any Sign Search word? _____

2. How many Sign Search rows are **blank** (i.e., **not** used) on the perfect rallye? _____

3. How many CMs were erected? _____

4. How many CMs were full credit? _____

Rallyemaster: Dean Stanton **ToBeAnnounced**.

Head Chemist Heather Mellows **ToBeAnnounced**.

Do not leave a message; either try the other number or call back.



Story: On my first college exam, in Honors Chemistry, I wasn't sure how I did. When I got it back, I had only 52 points. Eventually, the professor shared that the maximum was 60 points (not 100 as I had feared and assumed), and the top score in the class was 54! Today, the possible score is 1000 points. You are in a Honda Element, trying to follow the rallye correctly and search for chemical elements.

SI (As you'll read later, SI means there are no gimmicks in this paragraph.):

There are no gimmicks on capitalization or punctuation in this rallye and no gimmicks on spelling in the GIs. Line numbers at left will be referred to at the end of the rallye. Rallye master Dean and/or Head Chemist Heather will be available to answer questions from 11:15 AM to 1:15 PM. There will be a rallye school for novices and below, starting at noon. This is an unusual rallye and 2-page score sheet. Carefully study everything you are given to ensure success. Some terms are used by these GIs before they are introduced. Please read all the GIs before asking questions. **End SI.**

DEFINITIONS: (Forms of these words are implicitly defined, such as "activated" and "deactivate".)

ACTIVATE: bring into effect; make active

AT: within the indicated intersection or within 100 feet

CH: a chance to turn in the direction indicated

COMPLETE: execute or delete

CRI: activate the indicated RI, then delete all lower numbered uncompleted RIs

CS: continue straight through one intersection

DELETE: consider non-existent for the remainder of the rallye

DRI: delete the RI in effect; that activates the next higher numbered RI

ENCOUNTER: drive to and within 100 feet of

EXECUTE: physically do

INTERIOR LETTERS: Consecutive letters within a word that start after the word's first letter and end prior to the word's last letter. ("READ" are interior letters of "THREADS", but not of "READY".)

INTERSECTION: where you can proceed in more than one direction, excluding a U

L: turn to the left

NUMBER: one or more digits set off by spaces and/or punctuation

OBSERVE: see the indicated sign along your route and completely pass it

ON: physically upon the indicated road

OPP: an opportunity to turn in the direction indicated at an intersection

R: turn to the right

SIGNAL: an electronic traffic control device with three or more lights (working or not)

STOP: a red and white octagonal sign

T: **T** or the meeting of two rallye roads shaped like the letter T or T, approached up the stem

TURN: change your direction of travel between 60 and 120 degrees

U: reverse your direction of travel

WORD: one or more letters, set off by spaces or punctuation.

SIGNS: Only rallye and government erected signs with fewer than 8 words exist for this rallye. Different sides of a sign are considered different signs. Don't look behind you to see signs. The surfaces of roads, sidewalks and curbs are not valid signs and there are no valid signs on vehicles, fences or mailboxes. Don't split words. All word(s) following "L at", "R at", or "CS at" in an RI must appear on a sign where you are to execute the indicated action; instructions that use T, STOP, or SIGNAL are the exception and are to be executed at the defined object. Extra words on a sign do not invalidate the sign. Block numbers, the street designators: avenue, road, street, way, parkway, drive, circle and the cardinal directions: north, south, east, west do not exist on signs (except as used during SIs). Abbreviations of those street designators and cardinal directions also do not exist on signs.

INSTRUCTIONS AND ORDER OF PRECEDENCE:

When two or more instructions can be done at the same time and place, execute the instruction with the highest precedence. If two instructions have the same precedence, do the one higher on the page.

1. California Vehicle Code: Obey the law, drive safely, be courteous (e.g., let faster drivers pass).
2. SI (Special instructions): There are no gimmicks on SIs, just do them. Each traverse is an SI. Do not consider any other rallye instructions during an SI.
3. GI (General Instructions): The GIs are the pages labeled GIs that you are reading right now; they are the ground rules for today's rallye. GIs are always in effect.
4. Sign Search: During the rallye (except for SIs), watch for street sign matching as described in the Sign Search section.
5. Bonus: Turn on any street that matches 6 or more consecutive letters in the Sign Search, described below.
6. SUPP (supplementary instructions): SUPPs are numbered instructions labeled SUPP found on the **SUPPs and SIs Page**. Valid SUPPs will have one or more lettered parts, which are to be executed in alphabetical order. SUPPs come into effect as described under CMs. SUPPs go out of effect when executed unless instructed otherwise.
7. RI (Route Instructions): RIs are numbered instructions found on the RI page. RIs come into effect upon the completion of the numerically preceding RI and go out of effect upon completion, unless otherwise instructed. RI 1 is in effect until it is completed.
8. L at an otherwise uninstructed T; if you cannot L there, then U instead.
9. SAP: continue as straight as possible.
10. U and continue

CHEMISTRY MARKERS: A valid Chemistry Marker (CM) is a sign with a Chemical Element's Symbol and its atomic number (and no reflective tape). Chemical Element symbols are listed in the form of a Periodic Table of the Elements, in order by atomic number. Check the CM at the start so you'll recognize them. They are typically posted high on a utility or lamp pole and can be on your left or right. When you come to a valid CM, do in order:

1. Deactivate any uncompleted SUPP part(s) that are in effect.
2. Record the CM's atomic number on your score sheet's periodic table, directly under the letter(s) matching the letter(s) on the CM.
3. If the CM's atomic number corresponds to a valid SUPP or SI on the **SUPPs and SIs Page**, activate that SUPP or SI.

A CM no longer exists once its SUPP or SI is activated. Most CMs are worth 10 points but some are worth negative points, so do not drive around looking for CMs without a reason.

ROUTE: Rallye roads will be paved and public. Parking lots and driveways exist only at the start, the CP, when referred to by SIs, and the finish. U where safe and legal, but consider each U made where instructed. When an instructed turn has no direction indicated and it could be made in either direction, R.

CHECKPOINTS (CP): A CP is a place to stop and interact with rallye workers, identified by a "√" sign similar to the one at the start. There is no CP at the start, though you may ask the Rallymaster questions. The CP at Sylvan Park is open from 1pm – 3pm or until the last car checks in. When you arrive at a CP, hand your Score Sheet SS to the CP workers, and then say "Carbon is a girl's best friend." Answer any questions that the CP workers ask and follow any instructions they give you.

If you come to a "√" sign high on a pole, it indicates an *unstaffed* CP. Stop there; when stopped here, you are your own rallye worker just long enough to enter the active RI number on the lowest-numbered empty CP space on your Score Sheet SS. Then set chirality (explained below) to S.

SIGN SEARCH and CHIRALITY

Chemical elements: they're everywhere. The Sign Search section of your score sheet has a table of search elements. Except during an SI, when any WORD on a street-naming sign you encounter matches one of the search elements, enter that word and its matching details into the top unused row (if any) of your Sign Search table *for that search element*. Matching requires at least 3 consecutive letters in the WORD to match the same number of letters at the **start** of the search element and is explained below.

Chirality is a geometric characteristic that the structure of a chemical object cannot superimpose with its mirror image. Such "enantiomers" are usually labeled left-handed or right-handed. Chirality statements on the RI page activate 50 feet after you complete the RI immediately above it. Certain SIs or SUPPs set Chirality instantly. The active chirality will be **S** (for *sinister*) or **R** (for *rectus*) or "non-chiral".

- While the active rallye chirality is **S**, the matched letters must be at the **LEFT** (i.e., the **START**) of the WORD (on the street-naming sign).
 - While the chirality is **R**, the matched letters must be at the **RIGHT** (i.e., the **END**) of the WORD.
 - While non-chiral, the matched letters must be **INTERIOR LETTERS** of the WORD. Record non-chiral as **X**.
- Matched letters selected from the WORD are always compared to the **start** of the search element.

When a WORD **matches** a search element (and there is an unused row for that element in your table):

1. Stop, record the currently active RI, the WORD, the greatest **number** (at least 3) of consecutive letters that match (*not* the letters themselves), and the active Chirality (**S**, **R**, or **X**). See the three example rows at right (to which we added boldface to point out the letter matching).
 2. After passing the sign, if the chirality *just recorded* is **R**, change your active chirality to **S** or vice versa (change **S** to **R**). Note: if you miss a WORD, your active chirality can be temporarily incorrect.
- Each table entry is worth 2 points, so each correct row is worth 8 points. No row will be used more than once. For the sign search, you only *record* such matching words; this does not direct you to *turn on* such a street (though other instructions could). Therefore, skipping the sign search will only reduce your score; it will not get you lost.

Element	RI	Street-name Word	Letter Count	Chirality
Samarium	<i>0</i>	Sample	3	<i>S</i>
Nickel	<i>0</i>	Panic	3	<i>R</i>
Thorium	<i>0</i>	Hawthorn	4	<i>X</i>

MISCELLANY

First timers and beginners should attend the rallye school at noon, then ask any remaining questions privately. Fill out the top of your two score sheets before leaving the start. During the rallye, you can reach the rallyemaster via the cell phone number listed on the score sheet. The finish is at St. John's Bar & Grill, 510 Lawrence Expressway, Sunnyvale, CA 94085. Before turning in your score sheet, answer the tiebreakers (TBs) on your score sheet SS. The finish opens at 3 PM and closes at 4 PM. Late score sheets may be penalized 5 points per minute late up to 4:15 PM, at which time they may no longer be accepted. Scoring and award presentation should be complete around 5 PM.

If you disagree with a gimmick as explained in the critique (i.e., answer key), first decide if it is something you are really upset about and if the points will make a difference to you. If so, you can file a protest. All protests must be turned in by 4:15pm. Each protest must be printed on a separate protest form, and must include your car number, your class, the active RI, the problem, and the desired resolution. (For Sign Search issues, be sure to indicate the action that most recently set your Chirality.) Honored protests may affect an individual car, an entire class, or the entire rallye.

Good luck and enjoy the rallye. Dean Stanton and Heather Mellows. We're sometimes sinister. Be nice, not amino acid.