



# Turning Mousetrap Car

Chelsea High School



**Purpose:** Each team will construct a car powered by one or more mousetraps. The car must complete a course consisting of a straight section, a left or a right turn, and then another straight section. The car which travels the longest distance in the track, without getting out of bounds, wins.

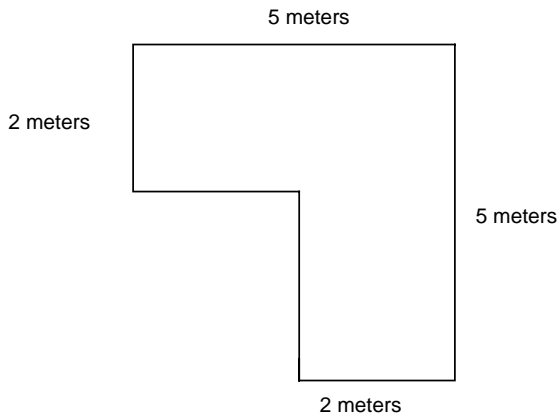


**Auto Parts:** The car can be made of any materials that you'd like, with only the following restrictions:

- 1) The power of the car must come **ONLY** from one or more standard mousetraps connected to the wheels of the car. Elastic materials can be used in building the mousetrap, but only to transmit the force stored in the spring of the mousetrap to the wheels.
- 2) The mousetraps must be commercially available mousetraps. For example, Victor mousetraps are admissible, but Victor rat traps are not.
- 3) Mousetraps can be altered in ways that do not alter the total power output of the mousetrap. For example, attaching loops, poles or strings to the loop of a mousetrap is permissible, but altering the spring of the mousetrap (by replacing it, even if it is by inserting the spring of another mousetrap) is not admissible.
- 4) A maximum of 5 mousetraps can be used for the construction of the car
- 5) No electronic materials of any sort will be allowed. This includes, but is not restricted to, batteries, remote controls, and electric-powered engines.



**Course:** The race track will have the shape of a letter L with arms of equal length, and 2 meters in width. Each arm will be 5 meters long, or approximately 15 feet. Here is a graph of the track:



Note that teams can choose to start from either the top left or the bottom right. Each team will be free to decide where to start from.

**Scoring:** All cars will be impounded upon coming to the meet. Teams must place a tag next to the car when they do so.

Each car will be placed touching one or another start line, and will then let go. Teams will not be allowed to touch the car after it is let go. If there is a misfire, teams will be allowed one other try (but only one).

We will measure, in cm, the distance the car manages to cover before it stops or goes off the track, whatever comes first. The distance will be measured from the start line to the rearmost part of the car, as it stands where it stops or where it went off track, in the shortest line possible. Cars going off track will be assessed a penalty of 100 cm. We will also measure the time it takes the car to complete the course.

Teams will be ranked according to the distance their cars cover, from greater distance to smaller. Time will be used to break up ties. Teams will receive points according to their ranking, and according to the standard NSSL guidelines.