



Laser Rock Measure



LRM



LRM2



LRM-Dremel

**To Measure a Stone**

- a) Push and hold red button to turn laser “ON” and select UNIT option by releasing the red button
 - a. UNIT options include meters – **m**, feet and inches – ‘ “ , inches – “



- b) Insert set screw in the ring’s pinhole
- c) Aim laser beam at selected stone’s centre ensuring the beam is on the rock’s striking band



- d) Slowly sweep the beam across the stone to obtain lowest measure
- e) Push red button again to hold the measurement



- f) Repeat the above steps for the next rock



- g) The rocks' actual distance to the pinhole is .15 metre (0.492 ft) less than the displayed values.
- h) The rock with the smaller distance is closer to the pinhole.
- i) Hold the red button for three seconds to turn the laser off.

Adjusting the “pinhole” screw on the LRM2/LRM-Dremel



The LRM pin hole screw is spring loaded and adjusts automatically to different pin hole sizes and depths.

To increase the length of the pinhole screw, turn the set screw clockwise; to decrease the length of the pinhole screw, turn the set screw counter clockwise.

To change the laser's batteries

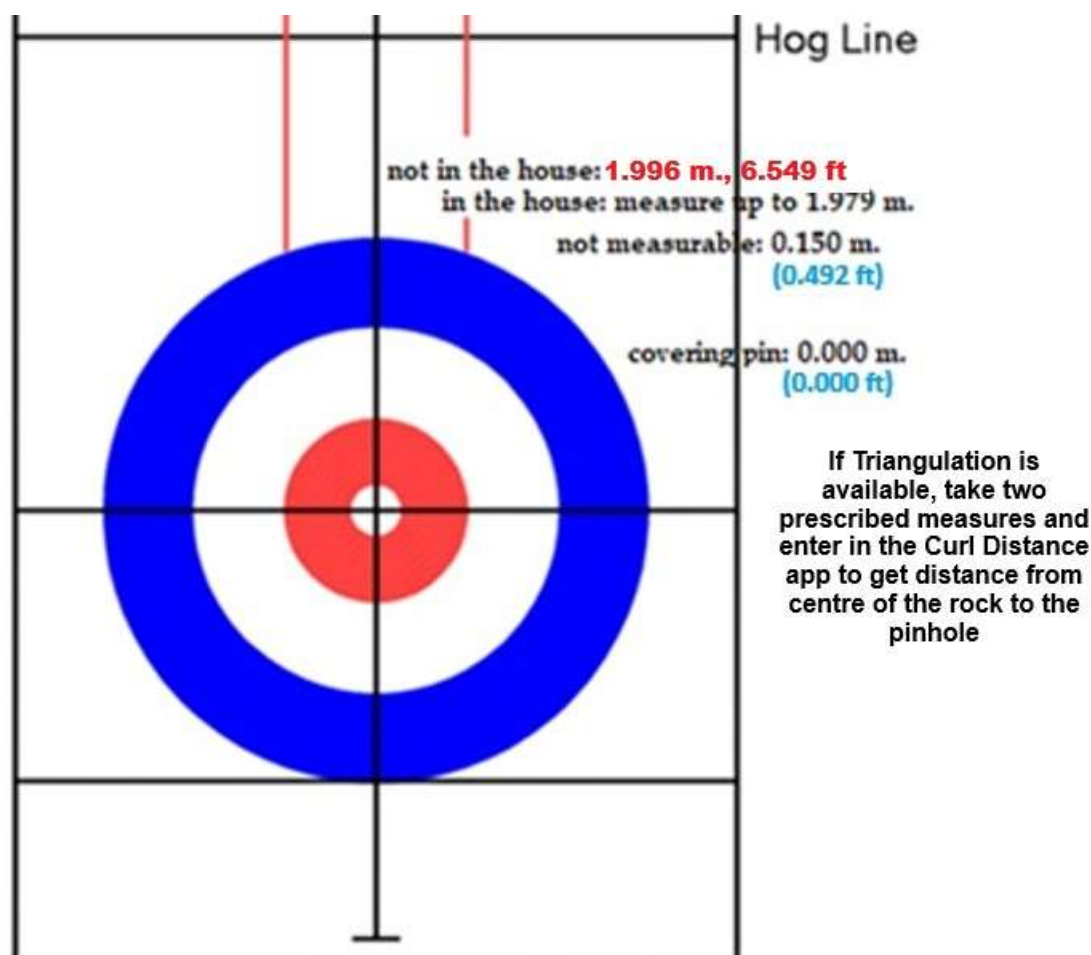


Remove the laser from its position in the LRM, LRM2 and LRM-Dremel by loosening the stainless screw. Slide the laser from its bracket. Remove the cover from the back of the laser to expose the battery compartment. Replace the two “AAA” batteries and battery compartment cover. Reinsert the laser in the LRM/LRM2/LRM-Dremel and tighten the stainless screw.



SCORING (Using LRM/LRM2/LRM-Dremel)

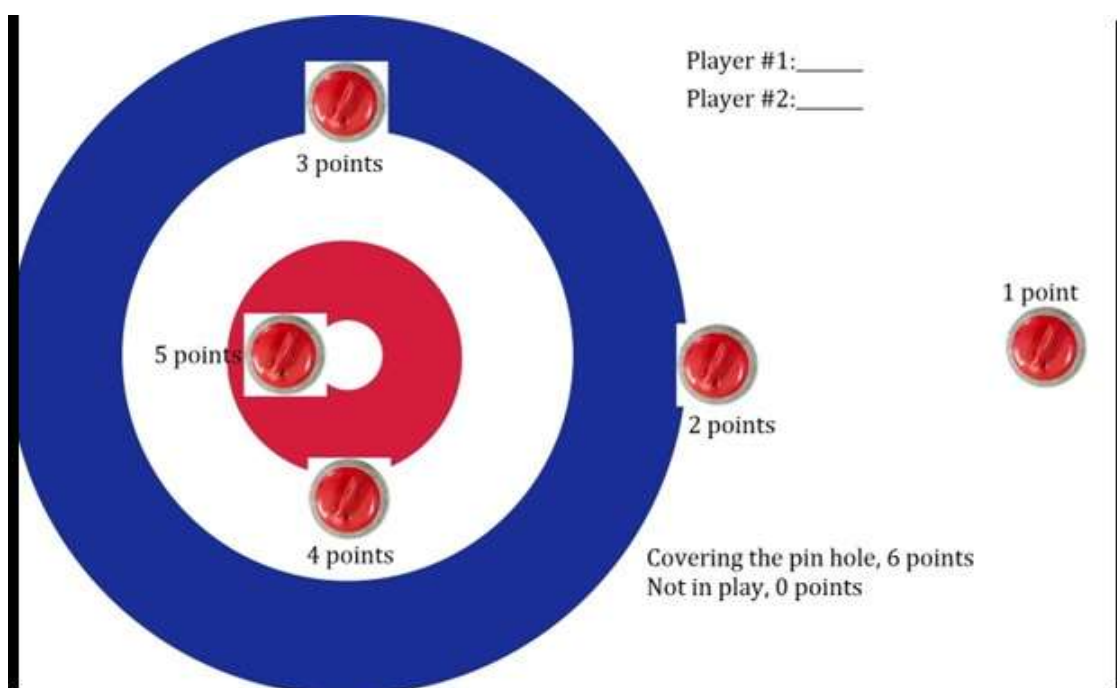
- 1st Tie breaker for final pool standings will be teams' head-to-head game results
- The 2nd Tie breaker will be the Tie Breaker draw to the button. Following their 1st game, both team members will throw **one** rock from their usual end and scored as follows:
 - Rock in the house covering the pin hole: 0.000 meters, 0.000 feet
 - Rock in the house and not measurable: 0.150 meters, 0.492 feet
 - If Triangulation pinholes are available, take measure 1 and measure 2 and enter in Curl Distance app to get a number
 - Rock in the house and measurable: 0.150 meters to 1.979 meters, 0.492 to 6.492 feet
 - Rock not in the house: 1.996 meters, 6.549 feet
- The sum of the team's draw to the button will be used as the 2nd Tie breaker
- Sweeping allowed from the hog line in, no sweeping of opposition rocks
- If teams remain tied after 2nd Tie breaker, the 1st thrower's score attained will be used as 3rd Tie breaker
- If teams remain tied after the 3rd Tie breaker, the 4th Tie breaker will be an additional single stone delivered by either curler from each team for measurement to the button using the scoring system described above





SCORING (Without LRM/LRM2/LRM-Dremel)

- 1st Tie breaker for final pool standings will be teams' head-to-head game results
- The 2nd Tie breaker will be the Tie Breaker draw to the button. Following their 1st game, both team members will throw **one** rock from their usual end and be scored as follows:
 - 6 points covering the pin hole on the button
 - 5 points touching the button
 - 4 points touching the four-foot ring
 - 3 points touching the eight-foot ring
 - 2 points touching the twelve-foot ring
 - 1 point in play but not touching any part of the house
- The sum of the team's draw to the button will be used as the 2nd Tie breaker
- Sweeping allowed from the hog line in, no sweeping of opposition rocks
- If teams remain tied after 2nd Tie breaker, the 1st thrower's score attained will be used as 3rd Tie breaker
- If teams remain tied after the 3rd Tie breaker, the 4th Tie breaker will be an additional single stone delivered by either curler from each team for measurement to the button using the scoring system described above



[illegible]

The Last Stone Draw distance is calculated using the Curl Distance last stone draw measuring tool app. The distance is measured either from the centre pinhole to the nearest point of the stone or, *if the stone covers the centre, from two points 61 cm away from the centre pin using Triangulation*. The app calculates the real distance from the centre pinhole to the centre of the stone, *using the official formula and distances from World Curling*.

Any stone covering the centre pin, will be measured from two separate points 61 cm from the centre pinhole and 90 degrees apart (when available). These distances will be used to calculate the distance from the centre pinhole to the centre of the curling stone.



- a) Insert set screw in the first pinhole
- b) Aim laser beam at selected stone's centre ensuring the beam is on the rock's striking band



- c) Slowly sweep the beam across the stone to obtain lowest measure
- d) Push red button again to hold the measurement and record on suitable event sheet
- e) Repeat the above steps from the second pinhole



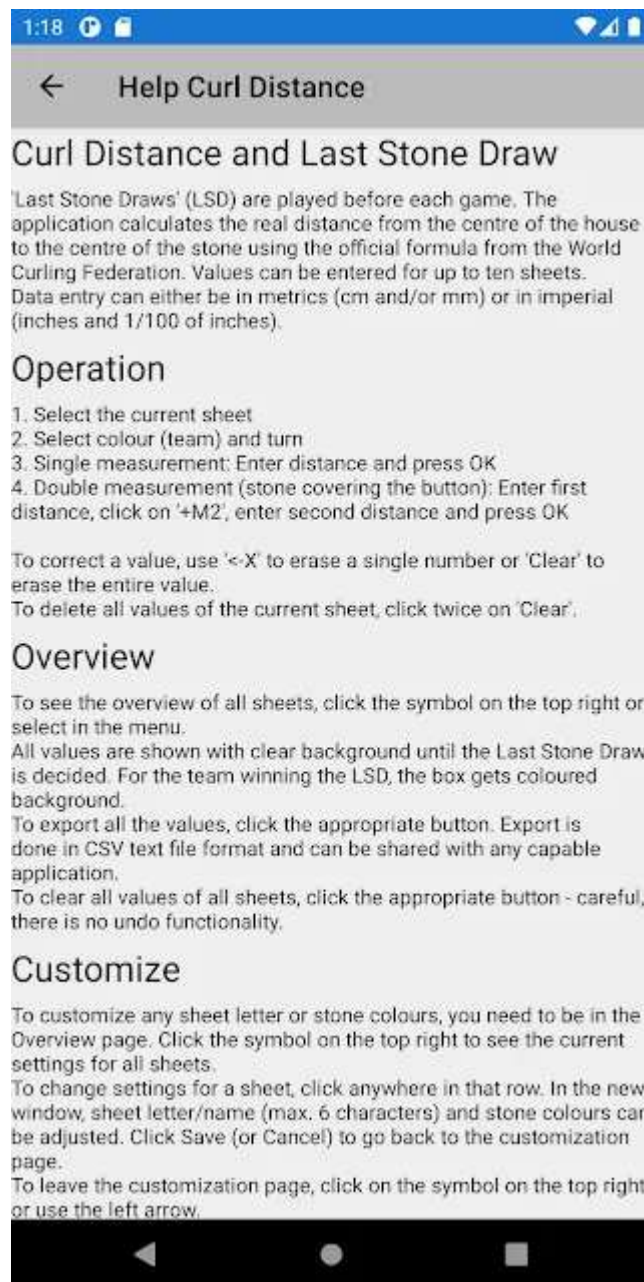
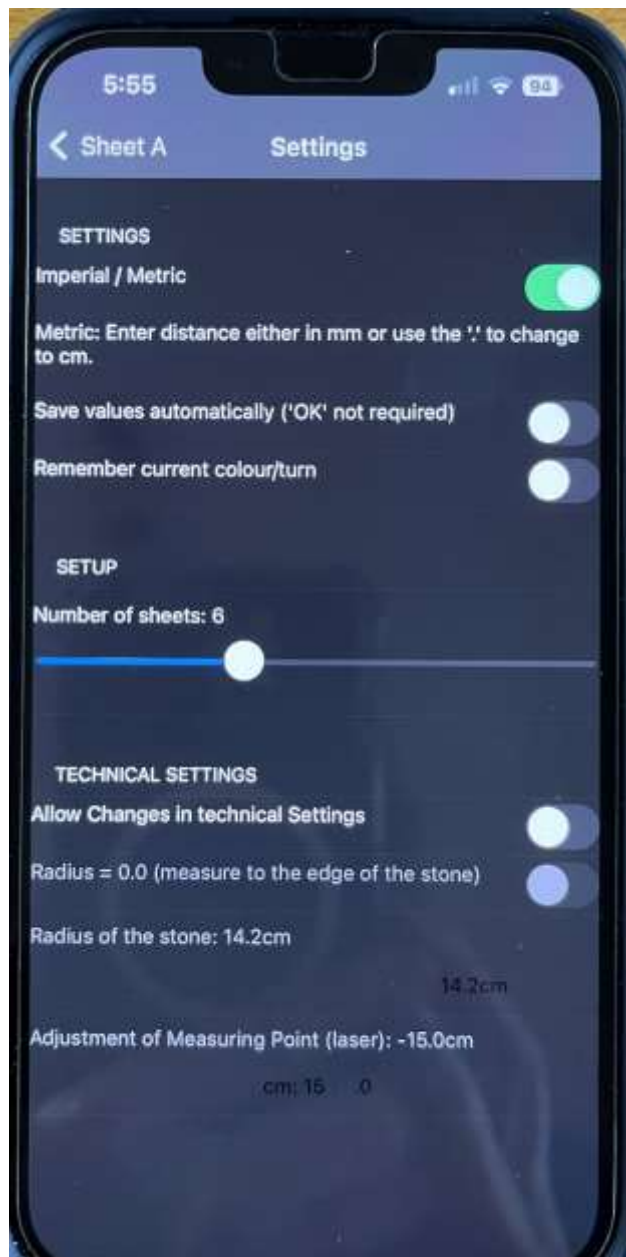
f) Enter the two measures into the Curl Distance app. In this example .634 m (63.4 cm) and .679 m (67.9 cm)



g) Record 6.2 cm (0.062 m) as distance from pinhole to centre of the rock

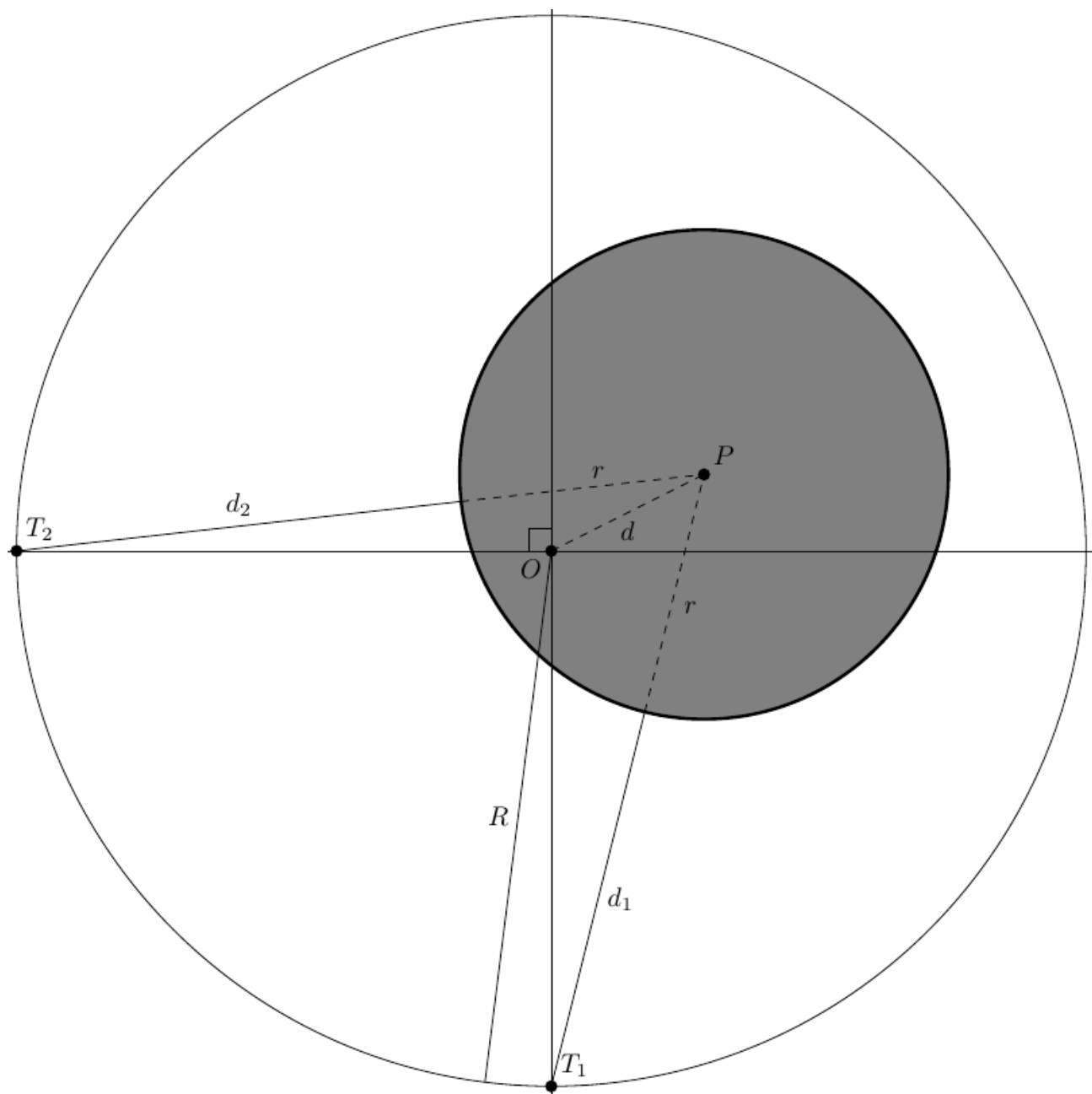


Settings and Help page for the Curl Distance app



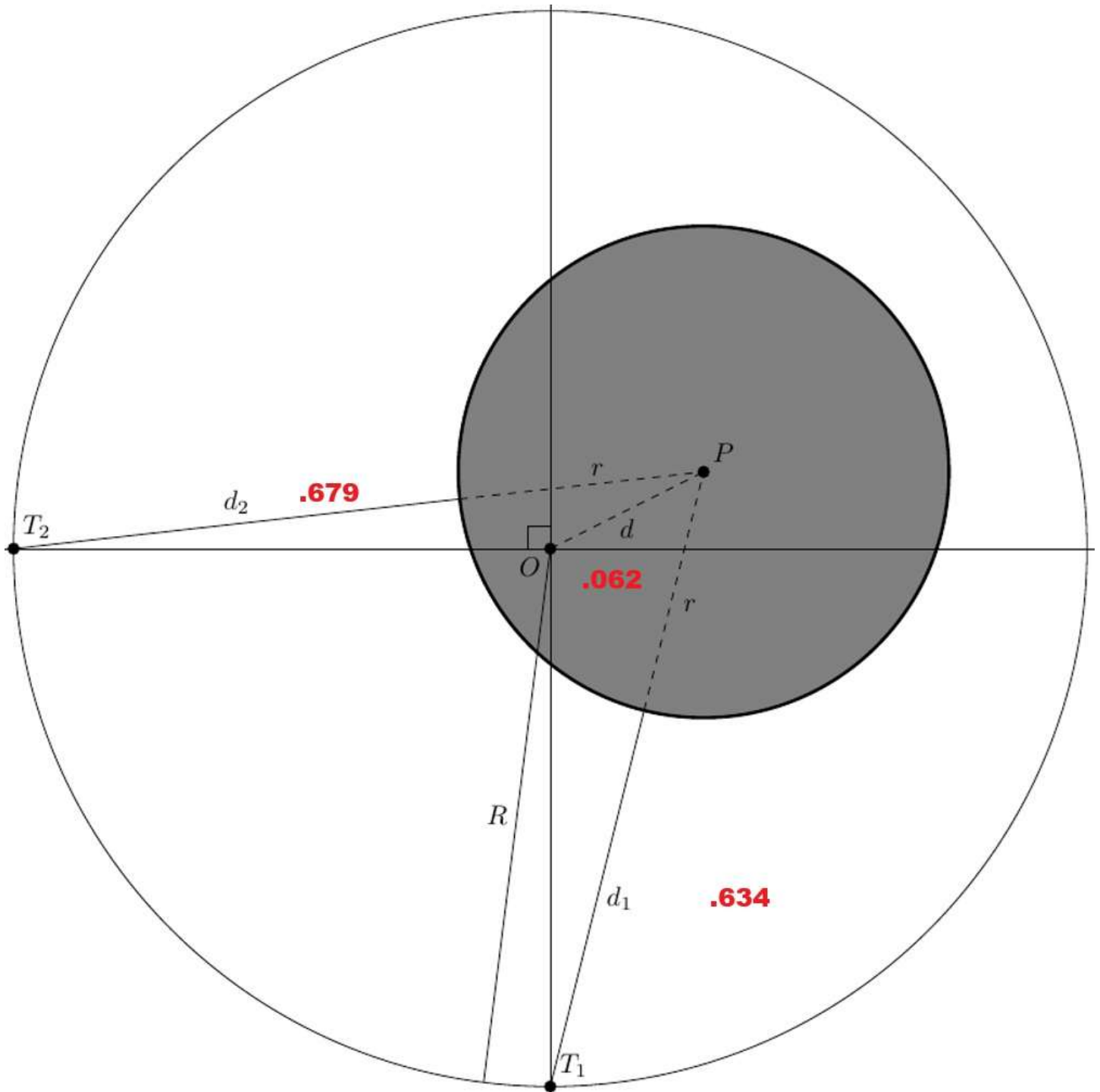


The Science





Example-Using the measurements obtained from our rock, we get





To accurately locate the additional holes for the Triangulation measurements, two people work best. First person sets template, the second person drills the holes.

Equipment required for Triangulation

- 1) Template for adding required pinholes
- 2) 3/8" drill bit
- 3) Drill