**How to measure the height using sextant**

**Material:**

Sextant apparatus, observing height.

**Measure the height using sextant:**

A sextant is a mechanical device for measuring the angle between two objects.

* Most commonly associated with navigation at sea, a sextant can also be used to help calculate the height of trees, buildings, flagpoles or any other vertical object.
* Choose an observation point from which you can clearly see both the top and the bottom of the object you wish to measure.
* Determine the exact distance between the observation point and the base of the object.
* Set the sextant to zero and look at the object through the eyepiece, adjusting your view until it is in the center of the frame.
* Adjust the sextant arm to split the screen in two halves.
* Continue moving the arm until the top half of the object on one side of the image is aligned with the bottom half of the object on the other side of the image.
* Read the angle from the arc of the sextant.
* Use a scientific calculator to find the height of the object by multiplying its distance from the observation point by the tan of the angle that you measured. For example, if you were 150 feet from the base of the object, and the recorded angle was 75 degrees, the height of the object would be:
* 150 x tan 75 = 560 feet.