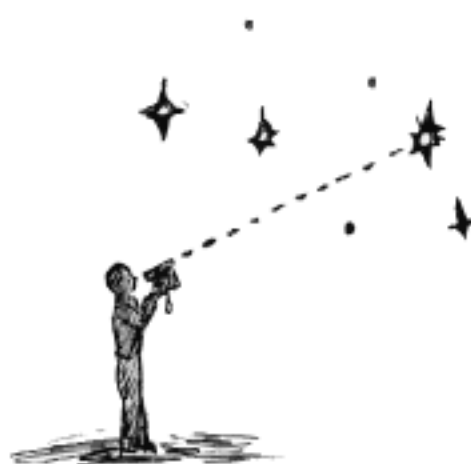


# Making A Simple Quadrant

**Materials:** This sheet, a straw, about 10 inches of string, a heavy paperclip or pen, and clear tape.

**Step 1:** Read all instructions first as following them will lead to their eventual illegibility.



**Step 2:** Fold this sheet along line A so that these instructions are on the inside.



**Step 3:** Poke a hole through The Dot, and be sure to punch through both sides of the paper.



**Step 4:** Thread your string through the hole and tie it into a loop.



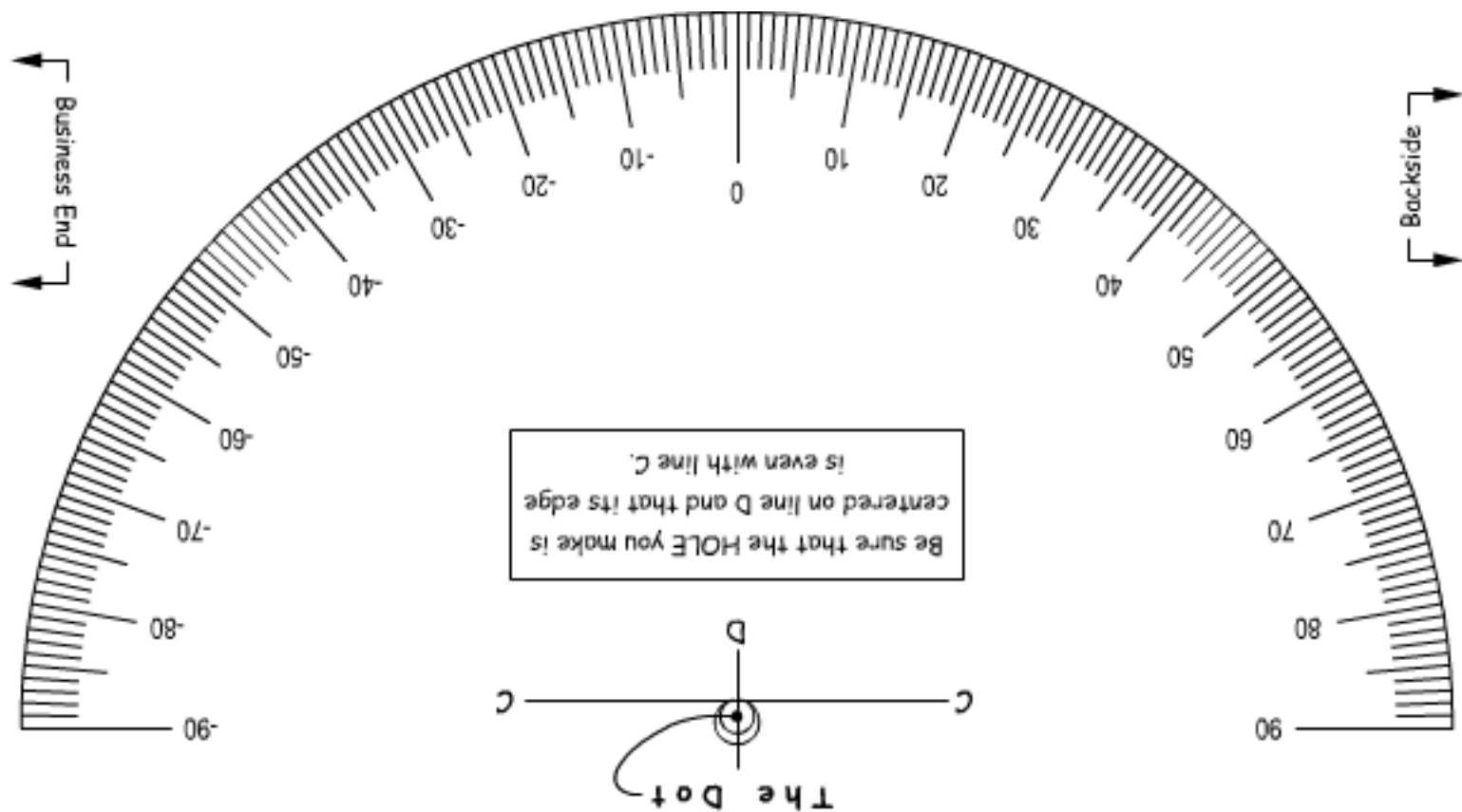
**Step 5:** Tape the straw onto the sheet parallel to lines B and A.



**Step 6:** Hang a paperclip or pen from the loop of string.

**Step 7:** Tape both sides of the sheet together to shore up your quadrant's frame.





Line B, tape straw parallel to me

Line A, fold along me

## Using Your Quadrant

[www.David.Colarusso.com](http://www.David.Colarusso.com)

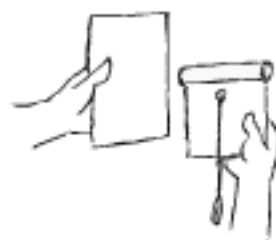
To find the altitude of an object, point the business end of the quadrant straight at it.

Allow the string to hang under the weight of your paperclip or pen. Once it has come to rest,

pointing straight down, read the number under the string. This number is the object's altitude. For most objects you can properly orient the quadrant by looking through the straw and aiming. For the Sun, however, do NOT do this. Instead take a piece



When you have the Sun properly sighted, the rays of light from the Sun will be traveling parallel to the straw. This

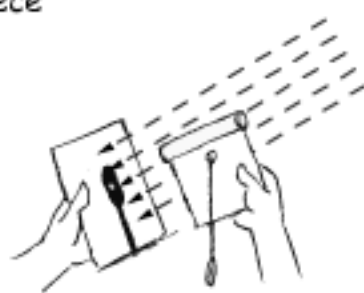


will cause the straw to cast a circular shadow as the Sun's rays travel straight down its center.

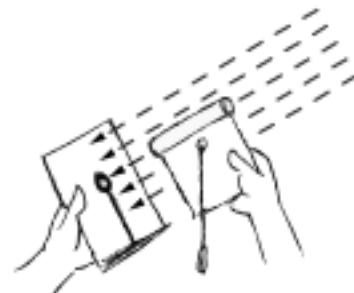


of paper and hold it parallel to to the quadrant's backside. Your goal is to move both together until the business

end is pointing directly at the Sun.



Not quite



Now you've got it