

Measuring angles with the Mathomat protractor.

How to measure an angle using a 360-degree protractor

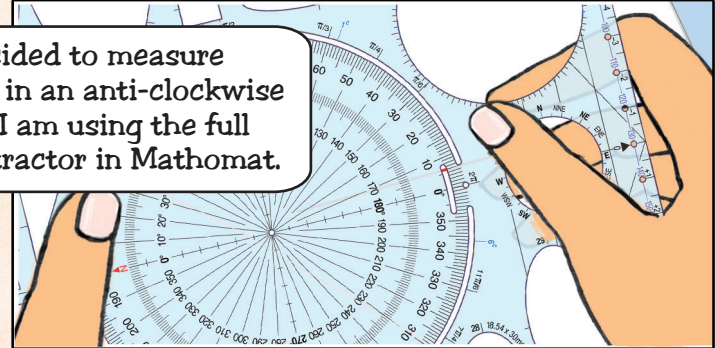
use with Mathomat V7

Anti-clockwise measurement

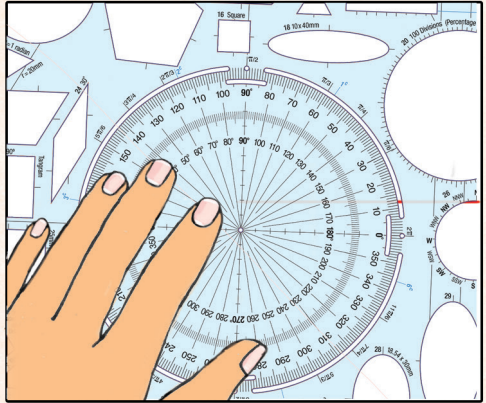
vertex
starting position of side
finished position of side

Measuring an angle where two lines meet at a vertex.

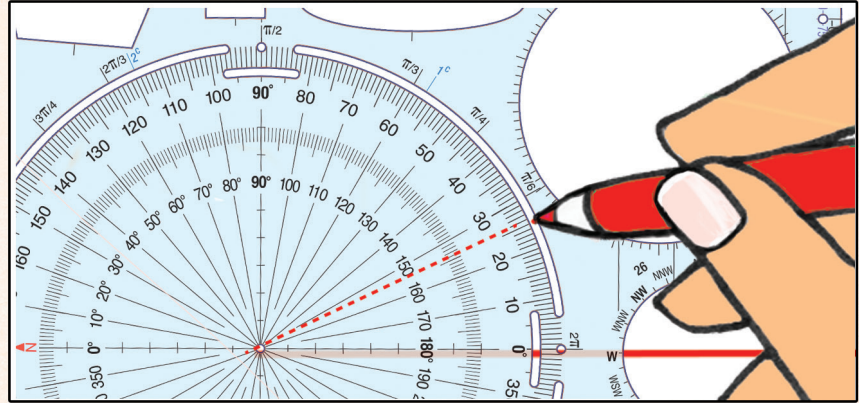
I have decided to measure this angle in an anti-clockwise direction. I am using the full circle protractor in Mathomat.



Step 1: Position central location hole of the protractor directly above the angle vertex.



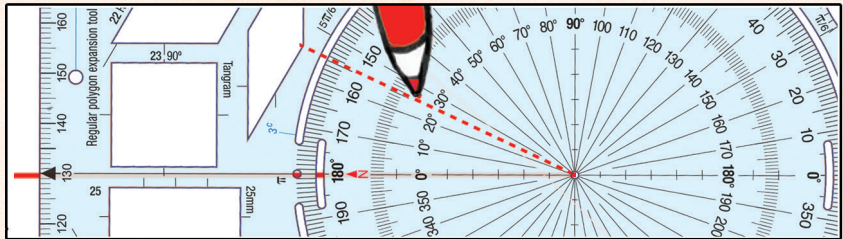
Step 2. Position the right hand side of the protractor base line directly over the starting position of the angle.



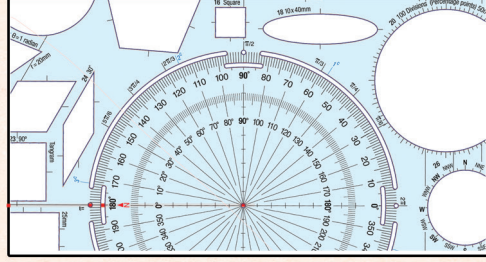
Step 3. Measure the angle in degrees using the **outer degree scale** on your protractor.

Clockwise measurement

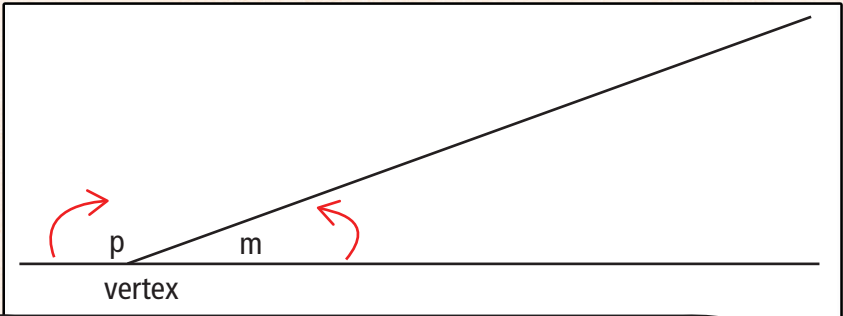
vertex
starting position of side
finishing position of side



Step 2 : With the vertex at the central location hole, measure the angle using the **inner degree scale** on the protractor.



Step 1. Position the left hand side of the protractor base line directly over the starting position of the side of the angle.

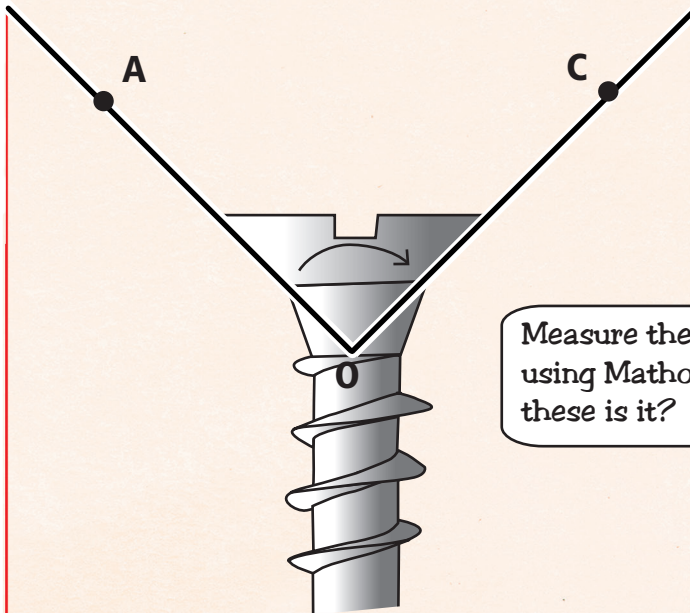


Measure one of these angles, either P or M. Calculate the other by deducting the measured angle from 180° .

Skills sharpener activity 1: protractor practice

1. Find the angle in the screw

Measure these angles with Mathomat.



The head angle for this counter sunk screw is shown by angle AOC. Counter sunk screws are usually made with head angles of either 60° , 82° , 90° , 100° , 110° or 120° .

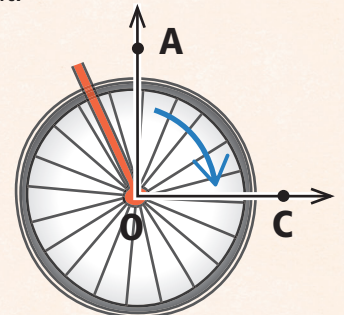
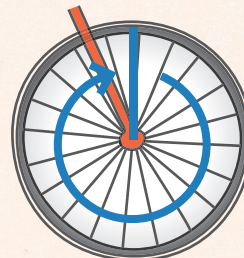
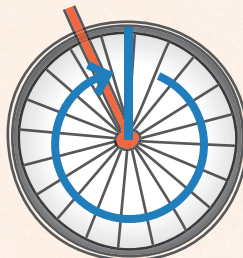
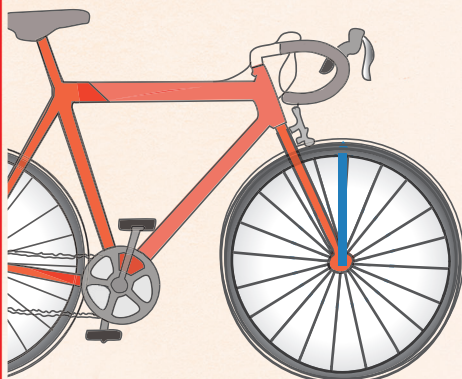
Measure the size of angle AOC using Mathomat. Which one of these is it?



Estimate of AOC is approximately equal to $^\circ$
 Measured with protractor, it is equal to $^\circ$

2. Bicycle turns

Jed rides his bike for $2\frac{1}{4}$ turns of its wheel. How many degrees has it turned in total? Measure the size of angle AOC to find out.



Total degrees turned: $^\circ$
 Revolutions 0

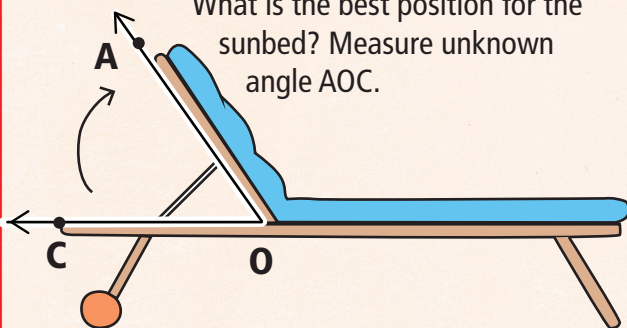
$^\circ$
 1

$^\circ$
 2

$720^\circ + \dots\dots\dots^\circ$ (size of AOC)
 = $\dots\dots\dots^\circ$ total degrees
 (remember to estimate first)

3. Sunbed

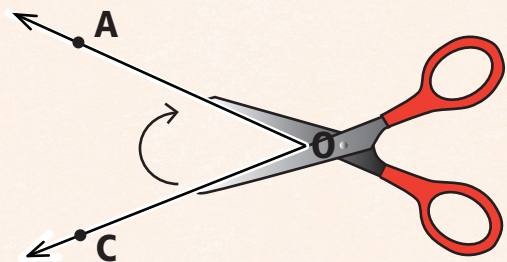
What is the best position for the sunbed? Measure unknown angle AOC.



Estimate of AOC is approximately equal to $^\circ$
 Measured with protractor, it is equal to $^\circ$

4. Scissors

What is the angle the blades make? Measure the unknown angle AOC.



Estimate of AOC is approximately equal to $^\circ$
 Measured with protractor, it is equal to $^\circ$

Answers: 1. 90° , 2. 810° , 3. 55° , 4. 45°