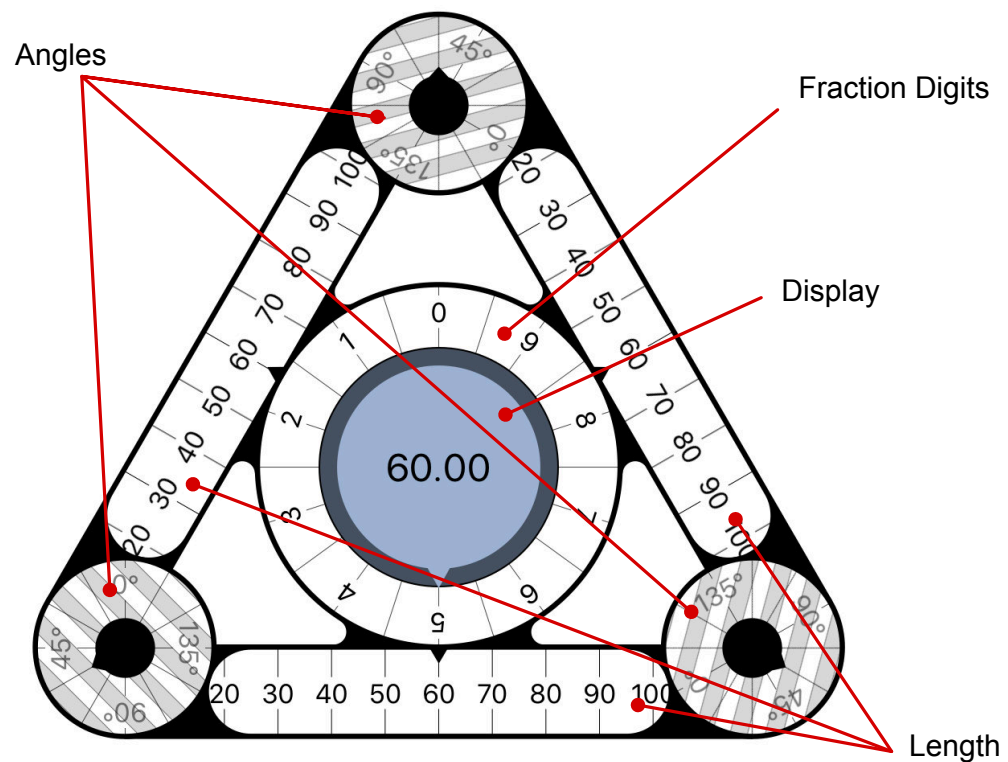


Trivice

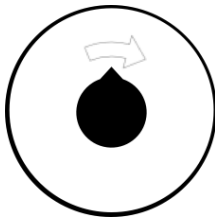
Trivice is a trigonometric tool that can calculate edges and angles of any given triangle. The necessary parameters are:

- ▶ Three edges or
- ▶ Two edges and one angle or
- ▶ One edge and two angles

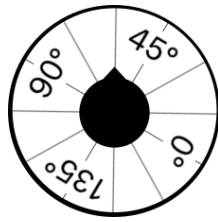
The input is made completely without the keypad by using the graphical controllers on the corners and edges. The value of the active controller is shown in the display in the middle of the device.



Input of angles



Initial

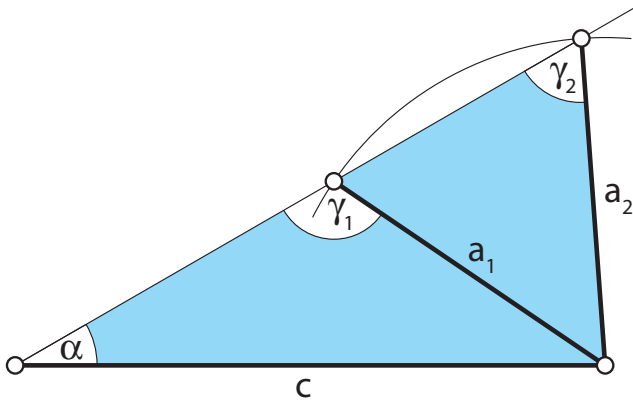


Set

An angle is specified by turning the appropriate controller clockwise.

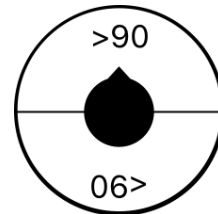
An angle of 90° can be specified with a double tap.

One angle and two edges can lead to two solutions in some cases:



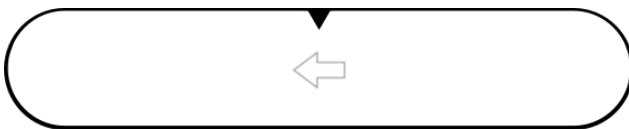
In the example above, the angle α as well as the edges c and a are specified. This leads to two solutions for the required angle γ .

To determine the designated result, the unknown angle can be specified as either larger or smaller than 90°. The appropriate controller is therefore used as a switch. In the example above, γ_1 would be larger than 90° and γ_2 smaller than 90°.

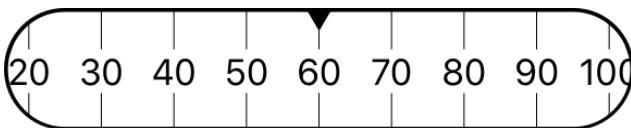


Switch between $< 90^\circ$ and $> 90^\circ$

Input of edges



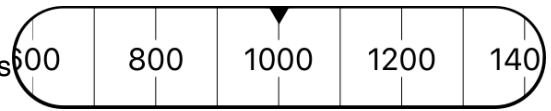
Initial



Set

An edge is specified by dragging the scale to the left or right. The current value is shown in the centre.

If large values need to be set, the scale can be scaled by tapping twice before dragging. If, for example, the scale is to be halved, the slider is tapped twice and the scale is moved by the second tap.

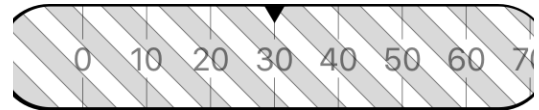
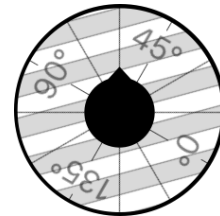


Two times magnified

Locked controllers

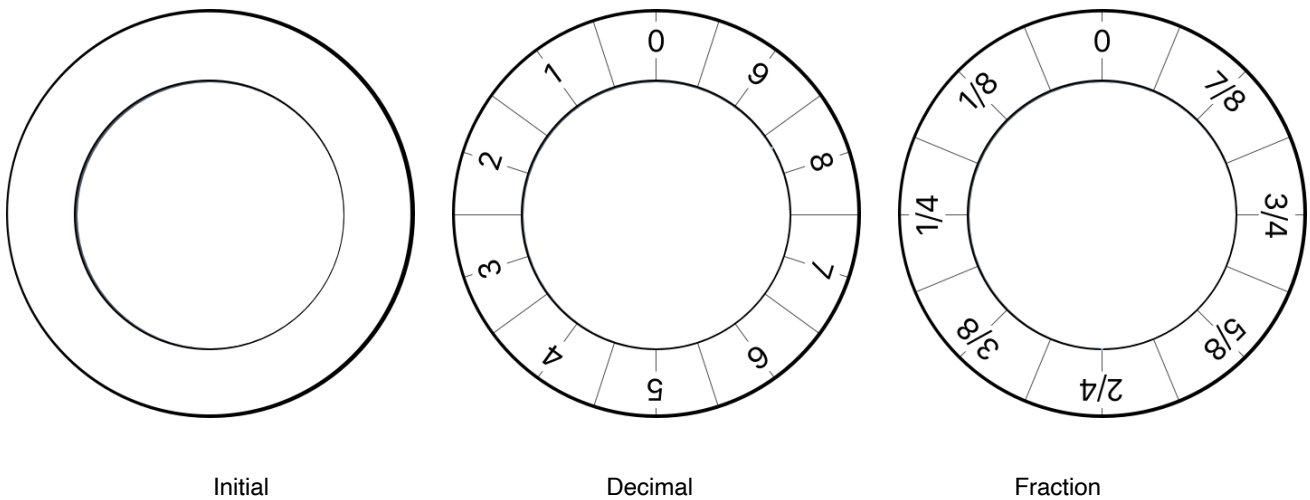
As soon as enough parameters are specified to calculate the triangle, the remaining controllers are locked. This is shown by a hatching on the controller.

If a controller with input is set back to zero, the locked controllers are released again.



Locked controllers

Fraction digits



The large controller in the middle is used to specify fraction digits. The Input can be decimal with a defined number of digits or fractional up to a certain denominator. The definition is located in the settings.

If no angle- or edge-controller is selected, no fraction digits can be entered.

Display

The display at the center shows the current selected value. A small arrow points to the controller that is currently active.

If no controller is active, the text "Choose angle or side" is shown.

By double-tapping on the left or right half of the controller, the current value is decreased or increased by 1 respectively.

The display also shows a preview of the triangle, if it is constructible.



Errors

If the triangle cannot be calculated because, for example, one side is too short, a corresponding error message is displayed. The controller for the faulty value is shown in red.

Toolbar

The toolbar below the controllers supplies the following functions:

Reset

The Reset-Button resets all controllers to their initial state. The result is discarded. This function is only available when at least one controller has been modified. Reset is also possible with a shake gesture.

Display

This displays the result of the calculation. These are all angles and edges as well as area, height, perimeter, incircle and circumcircle. It is only available after calculation. Upon display, the triangle is added to the History.

Share

A triangle on display can be exported, either as an image in PNG format or as PDF. Optionally, the height, in- and circumcircle as well as a value table can be displayed. The configuration is done in a preview, which can be opened at the display screen. By clicking on the share icon in the title bar, the selected format can be made available via Airdrop, the clipboard or for various installed apps.

History

The History holds the 10 last calculated triangles. The stored calculations can be recalled by tapping on one of the results. The current triangle is thereby discarded.

Settings

The quantity of fraction digits used during input and for display can be changed within the Settings. The Input can be changed from decimal to fractional. In addition, the sound signal in case of errors can be switched off.

Also in the settings, quick help, privacy policy, open source licenses and the imprint can be viewed (On iPad, the quick help is in the toolbar).