

Find the inverse of $y = \sqrt{x+4} + 1$.

Enter the equation, tap EXE and solve.

Tap Action, Assistant, invert and tap EXE.

It's often worth asking Classpad to simplify any result.

Tap **Simp**.

The inverse can also be expressed in factored form.

Edit Action Interactive
 $y = \sqrt{x+4} + 1$
 solve ($\{x = y^2 - 2 \cdot y - 3\}$)
 invert ($\{y = x^2 - 2 \cdot x - 3\}$)

Edit Action Interactive
 $y = \sqrt{x+4} + 1$
 solve ($\{x = y^2 - 2 \cdot y - 3\}$)
 invert ($\{y = x^2 - 2 \cdot x - 3\}$)
 simplify (ans) $\{y = (x+1) \cdot (x-3)\}$

Open a graph window, drag in the original function and adjust the scale.

Tap **Analysis, Sketch, Inverse**.

Edit Zoom Analysis
 $y = \sqrt{x+4} + 1$
 solve ($\{x = y^2 - 2 \cdot y - 3\}$)
 invert ($\{y = x^2 - 2 \cdot x - 3\}$)

The inverse is drawn.

Tap **Analysis, Trace** and tap the up cursor key. An algebraic function is displayed at the bottom of the graph window, but Classpad has simply swapped x and y .

We still need to solve this function for y as above in order to obtain the inverse function.

Edit Zoom Analysis
 $y = \sqrt{x+4} + 1$
 solve ($\{x = y^2 - 2 \cdot y - 3\}$)
 invert ($\{y = x^2 - 2 \cdot x - 3\}$)
 simplify (ans) $x = (y+4)^{(1/2)} + 1$