

Exercise 228

Use a calculator to evaluate $\sin(\sin^{-1}(-2))$ and $\tan(\tan^{-1}(-2))$. Explain the results of each.

Solution

Plug $\sin(\sin^{-1}(-2))$ and $\tan(\tan^{-1}(-2))$ into the calculator.

$$\sin(\sin^{-1}(-2)) = \text{ERROR}$$

$$\tan(\tan^{-1}(-2)) = -2$$

The first result is an error message because there's no angle you can take the sine of that gives -2 . There is an angle you can take the tangent of, though, that gives -2 .