

## Answer on Question #58561 – Math – Trigonometry

### Question

How is inverse sine of  $-1/\text{square root of } 5 = 206.6$  and  $333.4$ ?

### Solution

The Inverse sine of  $-1/\text{square root of } 5$  is approximately equal to  $-0.46$  or  $-26.6^\circ$ , but  $-26.6^\circ$  is the same as  $333.4^\circ$ , because  $360^\circ - 26.6^\circ = 333.4^\circ$  and we know the inverse sine is defined to be the inverse of the restricted sine function  $\sin x$ , where  $-\frac{\pi}{2} \leq x \leq \frac{\pi}{2}$ .

The domain of the inverse sine function  $\sin^{-1}x$  is  $[-1, 1]$ , its range is  $\left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$ .

**Answer:**  $333.4^\circ$ .