

Section 1.7 Inverse Trigonometric Functions

Objective: In this lesson you learned how to evaluate the inverse trigonometric functions and compositions of trigonometric functions and inverse trigonometric functions.

Course Number

Instructor

Date

I. Inverse Sine Function (Pages 180–181)

The **inverse sine function** is defined by . . .

What you should learn

How to evaluate the inverse sine function

The domain of $y = \arcsin x$ is _____. The range of $y = \arcsin x$ is _____.

Example 1: Find the exact value: $\arcsin(-1)$.

II. Other Inverse Trigonometric Functions (Pages 182–183)

The **inverse cosine function** is defined by . . .

What you should learn

How to evaluate the other inverse trigonometric functions

The domain of $y = \arccos x$ is _____. The range of $y = \arccos x$ is _____.

Example 2: Find the exact value: $\arccos \frac{1}{2}$.

The **inverse tangent function** is defined by . . .

The domain of $y = \arctan x$ is _____. The range of $y = \arctan x$ is _____.

Example 3: Find the exact value: $\arctan(\sqrt{3})$.

Example 4: Use a calculator to approximate the value (if possible). Round to four decimal places.

- (a) $\arccos 0.85$ (b) $\arcsin 3.1415$

III. Compositions of Functions (Pages 184–185)

State the Inverse Property for the Sine function.

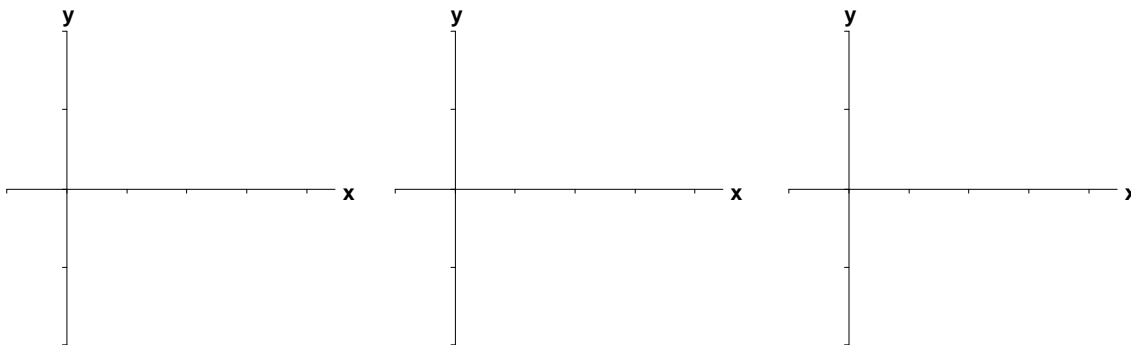
What you should learn
How to evaluate the compositions of trigonometric functions

State the Inverse Property for the Cosine function.

State the Inverse Property for the Tangent function.

Example 5: If possible, find the exact value:

- (a) $\arcsin(\sin 3\pi/4)$ (b) $\cos(\arccos 0)$



Homework Assignment

Page(s)

Exercises