Course Number

Instructor

Date

Section 4.7 Inverse Trigonometric Functions

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

I. Inverse Sine Function (Pages 320–321)

What you should learn
How to evaluate the inverse sine function

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

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

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

II. Other Inverse Trigonometric Functions (Pages 322–323)

What you should learn
How to evaluate the other inverse trigonometric functions

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

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

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

Example : Use a calculator to approximate the value (if possible). Round to four decimal places.
(a) arcos 0.85 (b) arcsin 3.1415

III. Compositions of Functions (Pages 324–325)

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

State the Inverse Property for the Sine function.

State the Inverse Property for the Cosine function.

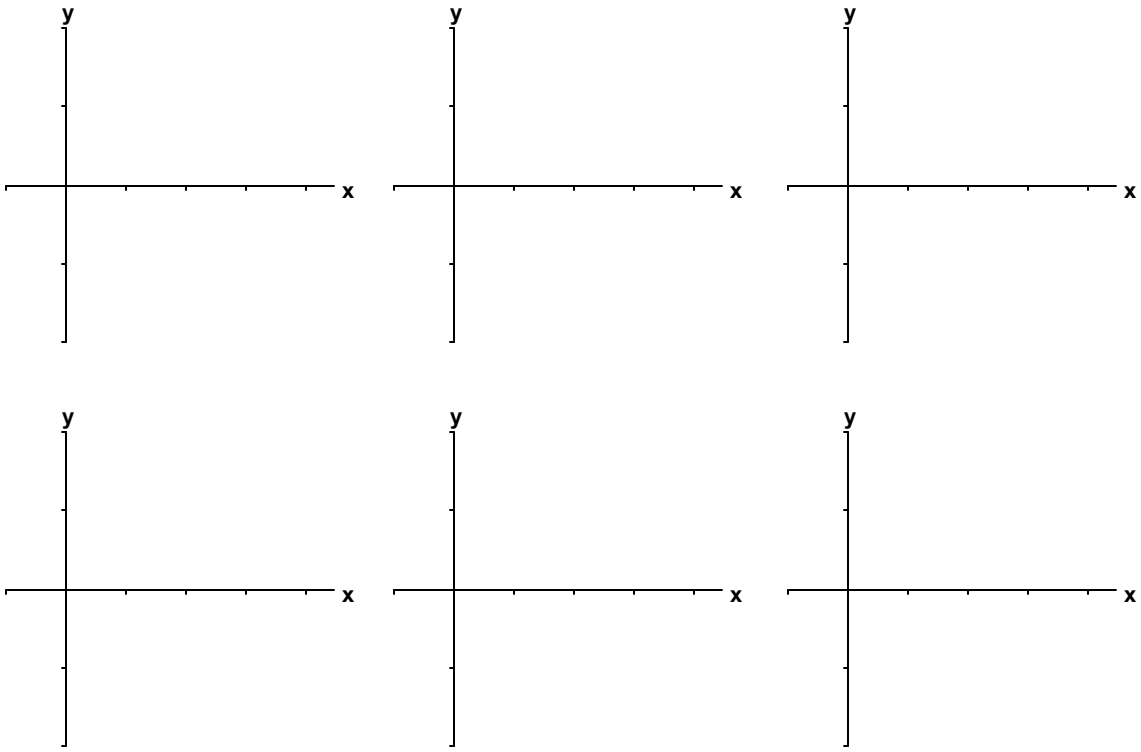
State the Inverse Property for the Tangent function.

The inverse properties do not apply for arbitrary values of x and y. For example, the inverse property for the sine function is not value for values of y outside the interval

_____.

Example : If possible, find the exact value:
(a) arcsin(sin $3p/4$) (b) cos(arccos 0)

Additional notes



Homework Assignment

Page(s)

Exercises