Course Number

Instructor

Date

Section 4.4 Trigonometric Functions of Any Angle

Objective: In this lesson you learned how to evaluate trigonometric functions of any angle.

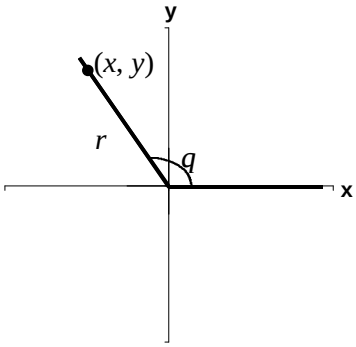
Important Vocabulary Define each term or concept.

Reference angles

I. Introduction (Pages 381–382)

What you should learn
How to evaluate trigonometric functions of any angle

Let q be an angle in standard position with (x, y) a point on the terminal side of q and $r = \sqrt{x^2 + y^2} \neq 0$. Complete the following definitions of the trigonometric functions of any angle:



sin q = _____ cos q = _____

tan q = _____ cot q = _____

sec q = _____ csc q = _____

Name the quadrants in which the sine function is positive.

_____

Name the quadrants in which the sine function is negative.

_____

Name the quadrants in which the cosine function is positive.

_____

Name the quadrants in which the cosine function is negative.

_____

Name the quadrants in which the tangent function is positive.

_____

Name the quadrants in which the tangent function is negative.

_____

Example 1: If $\sin q = \frac{1}{2}$ and $\tan q < 0$, find $\cos q$.

II. Reference Angles (Page 383)

What you should learn
How to use reference angles to evaluate trigonometric functions

Example 2: Find the reference angle q' for
(a) $q = 210°$ (b) $q = 4.1$

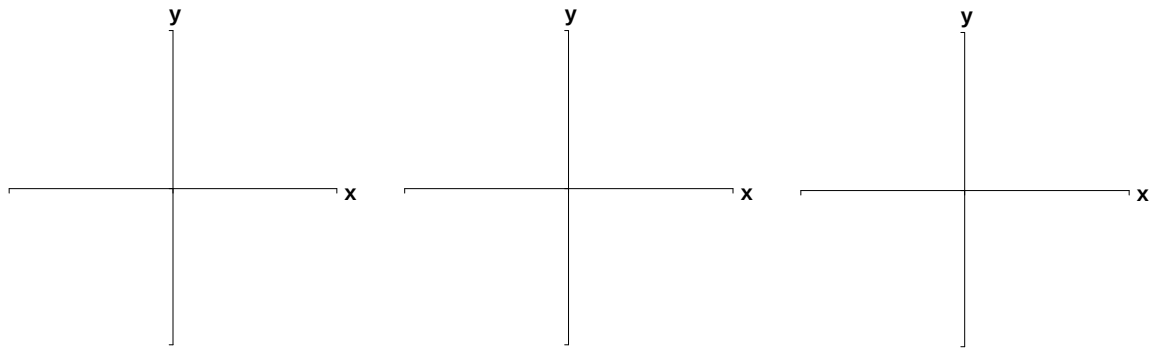
III. Trigonometric Functions of Real Numbers (Pages 384–386)

What you should learn
How to evaluate trigonometric functions of real numbers

To find the value of a trigonometric function of any angle q, . . .

Example 3: Evaluate $\sin\frac{11p}{6}$.

Example 4: Evaluate $\cos 240°$.



Homework Assignment

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