Chapter 8 Lab

1.
$\tan^{-1}\left(-\frac{\sqrt{3}}{3}\right)$ do not round

$\cos^{-1}(1)$ do not round

$\sin^{-1}(0)$ do not round

$\cos^{-1}(1)$ do not round

$\cot^{-1}(1)$ do not round

$\cot^{-1}(-\sqrt{11})$ round to nearest hundredth

2. $\sec\left[\sin^{-1}\left(\frac{2\sqrt{5}}{7}\right)\right]$

$3\cos^{-1}(3x) = 2\pi$

3. $\tan[\sin^{-1}(u)]$

$f(x) = \sin x$ $g(x) = \cos x$

Find the value of the composite function $f[g^{-1}(15/17)]$

4. Use sum and difference formulas to find the exact value of the trigonmetric function. Simplify your answer, including any radicals.

$\sin\alpha = 4/5$ $0 < \alpha < \pi/2$ $\cos\beta = -\frac{\sqrt{2}}{2}$ $\pi/2 < \beta < \pi$

$\sin(\alpha + \beta) =$

$\sin(\alpha - \beta) =$

$\cos(\alpha + \beta) =$

$\cos(\alpha - \beta) =$

5. Use a sum or difference formula to find the exact value of the trigonmetric function. Simplify your answer, including any radicals.

cos (165°) =

sin[$\sin^{-1}$ (5/13) + $\cos^{-1}$(-3/5)] =

6. Give the general formulas and all solutions for k = 0, 1, 2

$\sin\theta = -\frac{\sqrt{2}}{2}$

$2\cos 3\theta = 1$

7. Solve in radians on the interval $0 \le \theta \le 2\pi$
Use a calculator to solve the equation, round to two decimal places

$\tan\theta = 3$

$\cot\theta = 1/3$

8. Find the solutions to the trigonometric equations on the interval $0 \le \theta \le 2\pi$
q)

$\cot^2\theta = (\frac{3}{2})\csc\theta$

$\cos(2\theta) + 10\sin^2\theta = 5$

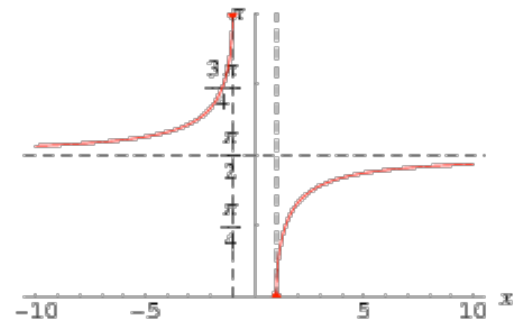
$7\cos(2\theta) = 21\cos\theta - 14$

9. Matching

Fill in the appropriate

letter in the the blank below:

_____

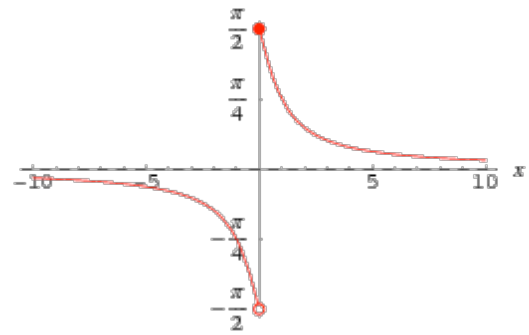


A. y= sinx

B. y = cosx

C. y = tanx

_____



D. y= cscx

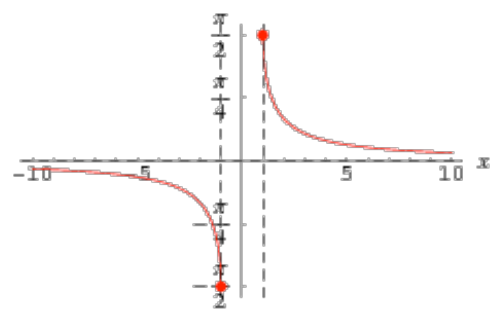
E. y = secx

F. y = cotx

G. y= $\sin^{-1}x$

H. y = $\cos^{-1}x$

_____



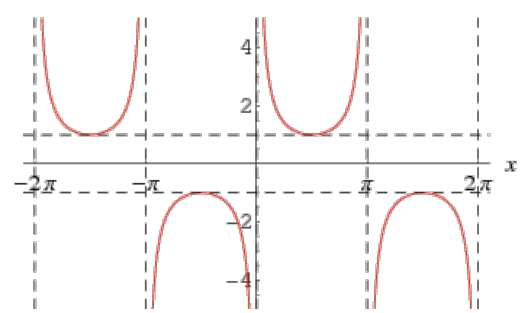
I. y = $\tan^{-1}x$

J. y= $\csc^{-1}x$

K. y = $\sec^{-1}x$

L. y = $\cot^{-1}x$

_____



_____