

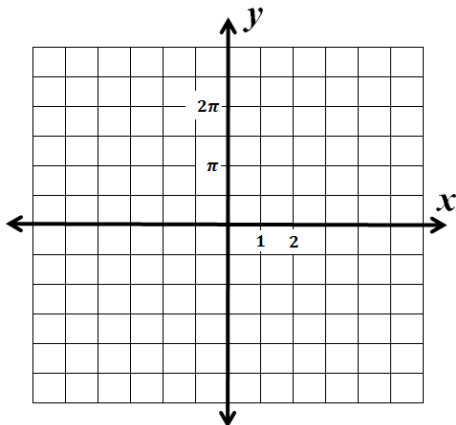
10.4 CA – Inverse Trig Functions

Name: _____

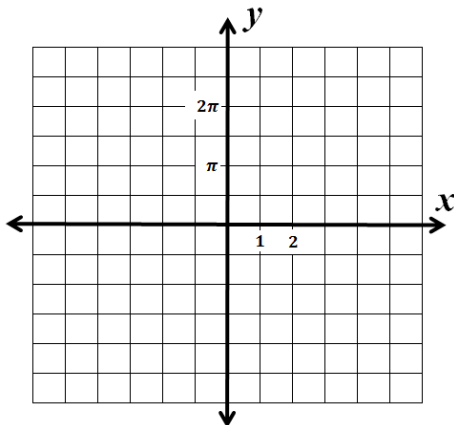
Pre-Calculus

For 1-6, graph the function.

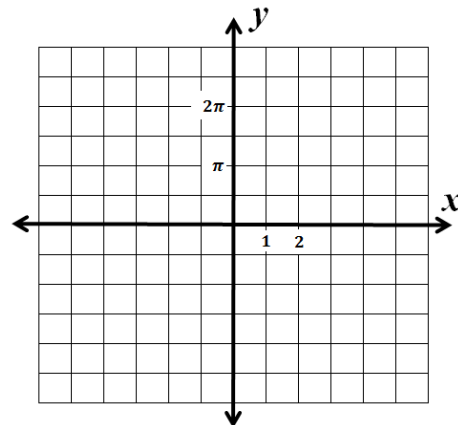
1) $y = 3 \sin^{-1} x$



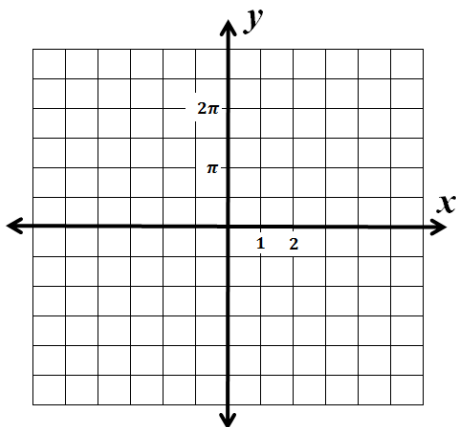
2) $y = \cos^{-1}(x - 2)$



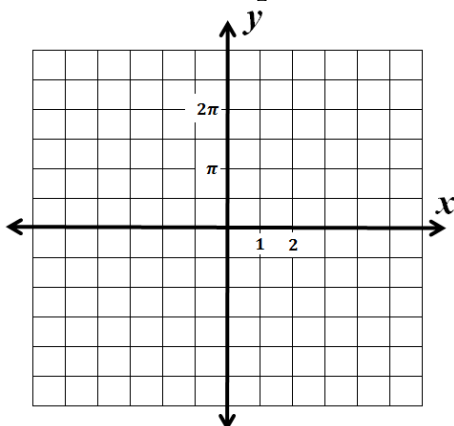
3) $y = \tan^{-1} x + \frac{\pi}{2}$



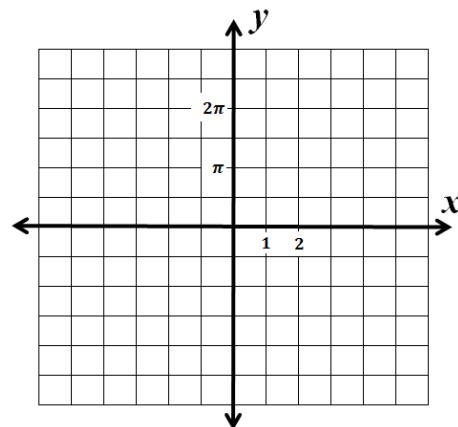
4) $y = 2 \sin^{-1} x + \pi$



5) $y = 3 \cos^{-1} x - \frac{\pi}{2}$



6) $y = 2 \tan^{-1} x - \pi$



For 7-14, find the exact value of the expression. Do not use a calculator! (radians or degrees both work)

7) $\sin(\operatorname{arccsc}(\frac{2\sqrt{3}}{3}))$

8) $\cos(\operatorname{arcsin}(\frac{\sqrt{2}}{2}))$

9) $\cos(\operatorname{arccos}(\frac{1}{2}))$

10) $\tan(\operatorname{arcsin}(\frac{\sqrt{2}}{2}))$

11) $\sec(\operatorname{arctan}(\frac{\sqrt{3}}{3}))$

12) $\sin(\operatorname{arcsin}(\frac{\sqrt{3}}{2}))$

13) $\cos(\operatorname{arcsec}(2))$

14) $\csc(\operatorname{arctan}(\sqrt{3}))$

For 15-22, find the approximate value of the expression by using a calculator. Round to three decimals. Only one answer is necessary. Assume degrees for inverse functions.

15) $\sin^{-1}(\frac{3}{4})$

16) $\sec(56^\circ)$

17) $\operatorname{arcsec}(\frac{21}{20})$

18) $\sec(\frac{1}{5})$

19) $\cot\left(\frac{7}{3}\right)$

20) $\cot^{-1}\left(\frac{7}{3}\right)$

21) $\operatorname{arccsc}(2.1)$

22) $\sec^{-1}(5)$

For 23-26, use a reference triangle to find the exact value of the expression.

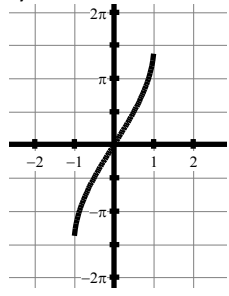
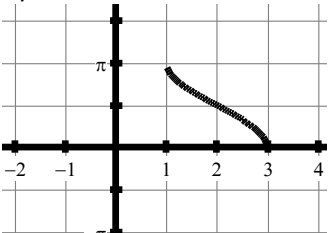
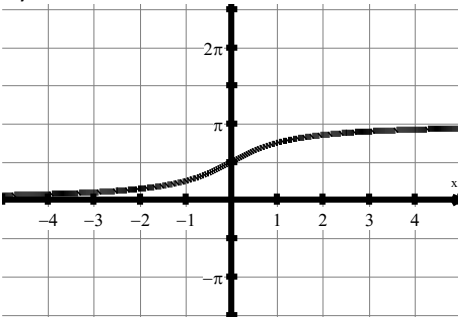
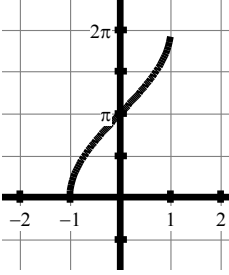
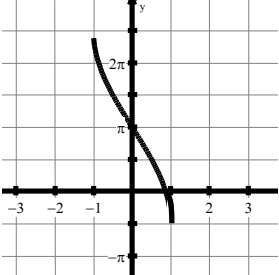
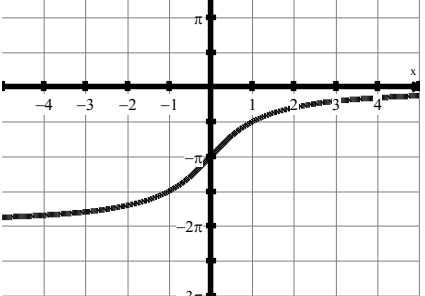
23) $\tan\left(\sin^{-1}\left(\frac{4}{11}\right)\right)$

24) $\sec\left(\operatorname{arccsc}\left(\frac{7}{2}\right)\right)$

25) $\csc\left(\cot^{-1}\left(\frac{5}{6}\right)\right)$

26) $\sec\left(\sin^{-1}\left(\frac{3}{7}\right)\right)$

Answers to 10.4 Corrective Assignment

1) 	2) 	3) 	
4) 	5) 	6) 	
7) $\frac{\sqrt{3}}{2}$	8) $\frac{\sqrt{2}}{2}$	9) $\frac{1}{2}$	10) 1
11) $\frac{2\sqrt{3}}{3}$	12) $\frac{\sqrt{3}}{2}$	13) $\frac{1}{2}$	14) $\frac{2\sqrt{3}}{3}$
15) 48.59°	16) 1.788	17) 17.753	18) 1.02 (use radians!)
19) -0.955 (use radians!)	20) 23.199°	21) 28.437°	22) 78.463°
23) $\frac{4}{\sqrt{105}} = \frac{4\sqrt{105}}{105}$	24) $\frac{7}{\sqrt{45}} = \frac{7}{3\sqrt{5}} = \frac{7\sqrt{5}}{15}$	25) $\frac{\sqrt{61}}{6}$	26) $\frac{7}{2\sqrt{10}} = \frac{7\sqrt{10}}{20}$