

CALCULATORS NOT ALLOWED**Find answers in both radians and degrees for # 1 – 17**

1. $\tan^{-1}\left(\frac{1}{\sqrt{3}}\right)$ radians _____ Degrees _____

2. $\cos^{-1}(-1)$ radians _____ Degrees _____

3. $\tan^{-1}(\sqrt{3})$ radians _____ Degrees _____

4. $\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)$ radians _____ Degrees _____

5. $\tan^{-1}(-1)$ radians _____ Degrees _____

6. $\cos^{-1}(0)$ radians _____ Degrees _____

7. $\sin^{-1}\left(\frac{\sqrt{3}}{2}\right)$ radians _____ Degrees _____

8. $\cos^{-1}\left(-\frac{1}{2}\right)$ radians _____ Degrees _____

9. $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$ radians _____ Degrees _____

10. $\tan^{-1}(0)$ radians _____ Degrees _____

11. $\tan^{-1}\left(\tan\frac{3\pi}{4}\right)$ radians _____ Degrees _____

12. $\tan^{-1}\left(\tan\frac{\pi}{3}\right)$ radians _____ Degrees _____

13. $\sin^{-1}\left(\cot\frac{\pi}{2}\right)$ radians _____ Degrees _____

14. $\cos^{-1}\left(\sin\frac{3\pi}{2}\right)$ radians _____ Degrees _____

15. $\cos^{-1}\left(\sin\frac{7\pi}{6}\right)$ radians _____ Degrees _____

16. $\cos^{-1}\left(\cos\frac{7\pi}{4}\right)$ radians _____ Degrees _____

17. $\sin^{-1}\left(\sin\frac{7\pi}{6}\right)$ radians _____ Degrees _____

18. $\cos\left(\tan^{-1}\frac{1}{\sqrt{3}}\right)$ _____

19. $\sin\left(\tan^{-1}(\sqrt{3})\right)$ _____

20. $\cos\left(\sin^{-1}\left(\frac{\sqrt{3}}{2}\right)\right)$ _____

21. $\sin\left(\tan^{-1}\left(-\frac{1}{\sqrt{3}}\right)\right)$ _____

22. $\cos\left(\tan^{-1}\left(-\frac{7}{3}\right)\right)$ _____

23. $\sin\left(\tan^{-1}\left(\frac{1}{5}\right)\right)$ _____

24. $\sin\left(\tan^{-1}\left(\frac{13}{9}\right)\right)$ _____

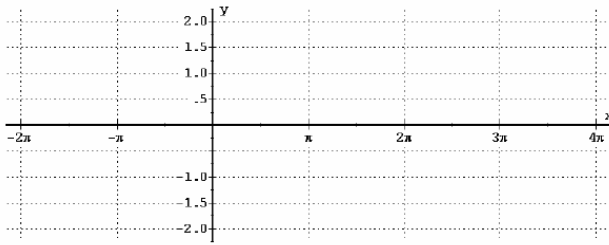
25. $\cos\left(\sin^{-1}\left(\frac{1}{2}\right)\right)$ _____

26. $\sin\left(\cos^{-1}\left(-\frac{2}{3}\right)\right)$ _____

27. $\cos\left(\tan^{-1}\left(-\frac{4}{3}\right)\right)$ _____

28. Graph over $-2\pi < x < 2\pi$.

a) $y = \tan x$



Domain:

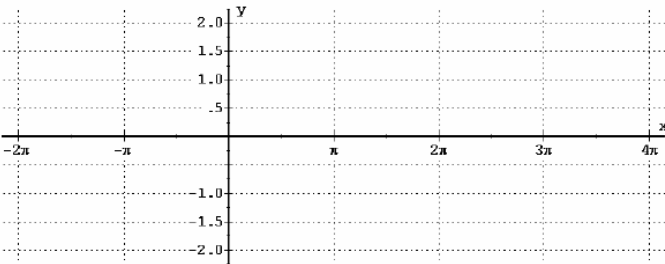
Range:

Does this graph have an inverse? Why or why not?
 Darken a portion of the graph that is one-to-one and thus have an inverse.

Domain of $y = \tan x$:

Graph over $-2\pi < x < 2\pi$ and then darken the portion that has an inverse.

29. $y = \sin x$



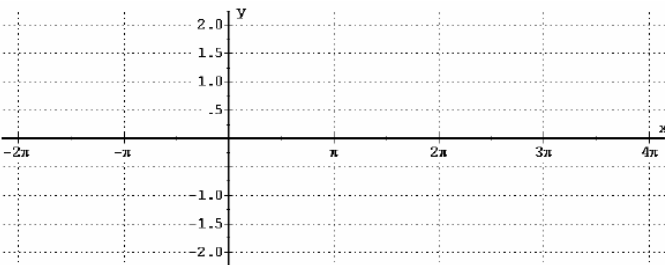
Domain:

Range:

Does this graph have an inverse? Why or why not?
 Darken a portion of the graph that is one-to-one and thus have an inverse.

Domain of $y = \sin x$:

30. $y = \cos x$



Domain:

Range:

Does this graph have an inverse? Why or why not?
 Darken a portion of the graph that is one-to-one and thus have an inverse.

Domain of $y = \cos x$:

31. Find one positive and one negative angles that are coterminal with 62°

32. Find one positive and one negative angles that are coterminal with $-\frac{2\pi}{9}$

33. Convert to degrees: $\frac{-2\pi}{18}$	34. Convert to radians: -82°		
35. A sector of a circle has arc length 25 cm and central angle of 25° . Find the radius and area.	36. A sector of a circle has radius 36 cm and central angle of $\frac{7\pi}{9}$. Find the arc length and area in terms of π		
37. $\sin \theta = \frac{12}{13}$; $\frac{\pi}{2} < \theta < \pi$. Find $\sec \theta$	38. The point $(-6, 8)$ is on the terminal side of an angle. Find $\sec \theta$		
Express in terms of a reference angle:			
39. $\tan 260^\circ$	40. $\sin -100^\circ$	41. $\sec 350^\circ$	42. $\cot 600^\circ$
43. $\csc \theta$ and $\tan \theta$ are both negative in what quadrant?		44. $\sec \theta$ and $\csc \theta$ are both negative in what quadrant?	