

NO CALCULATORS**Find answers in both radians and degrees for # 1 – 18**

1. $\text{Cos}^{-1}(-\frac{1}{2})$ radians _____ Degrees _____

2. $\text{Sin}^{-1}(-\frac{1}{2})$ radians _____ Degrees _____

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

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

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

6. $\text{Sin}^{-1}\left(-\frac{\sqrt{3}}{2}\right)$ radians _____ Degrees _____

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

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

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

10. $\text{Sin}^{-1}\left(-\frac{\sqrt{2}}{2}\right)$ radians _____ Degrees _____

11. $\text{Sin}^{-1}(-1)$ radians _____ Degrees _____

12. $\text{Cos}^{-1}\left(-\frac{\sqrt{3}}{2}\right)$ radians _____ Degrees _____

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

14. $\text{Sin}^{-1}\left(\cos\frac{5\pi}{6}\right)$ radians _____ Degrees _____

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

16. $\text{Sin}^{-1}\left(\sin\frac{5\pi}{4}\right)$ radians _____ Degrees _____

17. $\text{Cos}^{-1}\left(\cos\frac{4\pi}{3}\right)$ radians _____ Degrees _____

18. $\text{Cos}^{-1}\left(\cos\frac{\pi}{4}\right)$ radians _____ Degrees _____

19. $\cos\left(\text{Sin}^{-1}\frac{1}{2}\right)$ _____

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

21. $\tan\left(\text{Sin}^{-1}\left(-\frac{\sqrt{3}}{2}\right)\right)$ _____

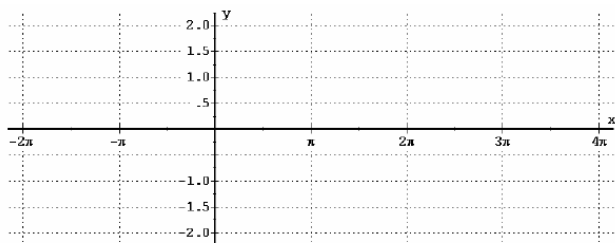
22. $\tan\left(\text{Cos}^{-1}\left(-\frac{4}{5}\right)\right)$ _____

23. $\cot\left(\text{Sin}^{-1}\frac{5}{7}\right)$ _____

24. $\tan\left(\text{Sin}^{-1}\left(-\frac{12}{13}\right)\right)$ _____

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

a) $y = \tan x$



Domain:

Range:

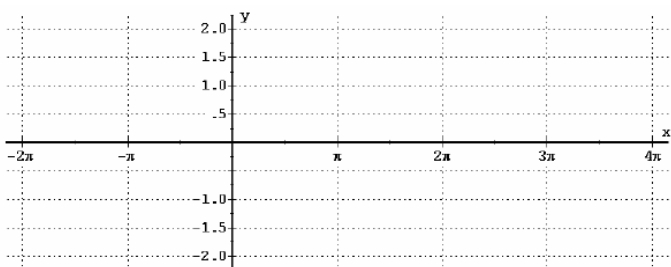
Does this graph have an inverse? Why or why not?

Darken a portion of the graph that is $y = \tan x$:

Domain of $y = \tan x$:

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

26. $y = \sin x$



Domain:

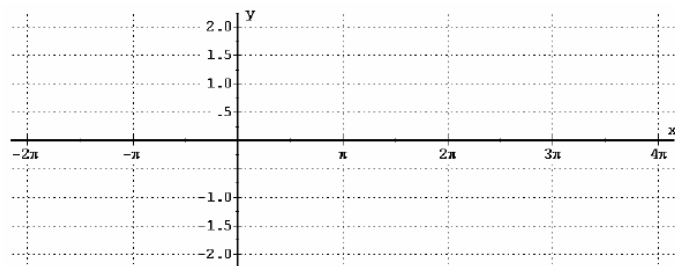
Range:

Does this graph have an inverse? Why or why not?

Darken a portion of the graph that is $y = \sin x$:

Domain of $y = \sin x$:

27. $y = \cos x$



Domain:

Range:

Does this graph have an inverse? Why or why not?

Darken a portion of the graph that is $y = \cos x$:

Domain of $y = \cos x$:

28. Find one positive and one negative angles that are coterminal with 627°

29. Find one positive and one negative angles that are coterminal with $-\frac{9\pi}{5}$

30. Convert to degrees: $\frac{-7\pi}{9}$	31. Convert to radians: -254°		
32. A sector of a circle has arc length 15 cm and central angle of 2.5 radians. Find the radius and area.	33. A sector of a circle has radius 18 cm and central angle of 34° . Find the arc length and area in terms of π		
34. $\sin \theta = \frac{-12}{13}$; $\frac{3\pi}{2} < x < 2\pi$. Find $\sec \theta$	35. The point (6, -8) is on the terminal side of an angle. Find $\csc \theta$		
Express in terms of a reference angle:			
36. $\cos 300^\circ$	37. $\cot 280^\circ$	38. $\sec(-30^\circ)$	39. $\csc 170^\circ$
40. $\cos \theta$ and $\sin \theta$ are both negative in what quadrant?		41. $\tan \theta$ and $\cos \theta$ are both negative in what quadrant?	