

List the range for each of the inverse functions below:

$\text{Sin}^{-1}(x)$:

$\text{Cos}^{-1}(x)$:

$\text{Tan}^{-1}(x)$:

1. $\text{Sin}^{-1}\left(\sin\left(\frac{\pi}{3}\right)\right) =$

2. $\text{Sin}^{-1}\left(\sin\left(\frac{5\pi}{6}\right)\right) =$

*careful!

3. $\text{Cos}^{-1}\left(\cos\left(\frac{2\pi}{3}\right)\right)$

4. $\text{Tan}^{-1}\left(\tan\left(\frac{\pi}{2}\right)\right)$

5. $\text{Cos}^{-1}\left(\cos\left(-\frac{\pi}{4}\right)\right)$

6. $\text{Sin}^{-1}\left(\sin\left(\frac{8\pi}{3}\right)\right)$

11. $\tan\left(\text{Cos}^{-1}\left(\frac{12}{13}\right)\right)$

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

13. $\csc\left(\text{Cos}^{-1}(-0.4)\right)$

14. Graph $y = \tan(\tan^{-1}(x))$. Give the domain, range and simplified rule for the function. (you may use your calculator as an aide)

Chapter Review:

15. Convert 7.2 radians to degrees and minutes.

16. Name two angles, one positive and one negative, that are coterminal with 2.3 radians

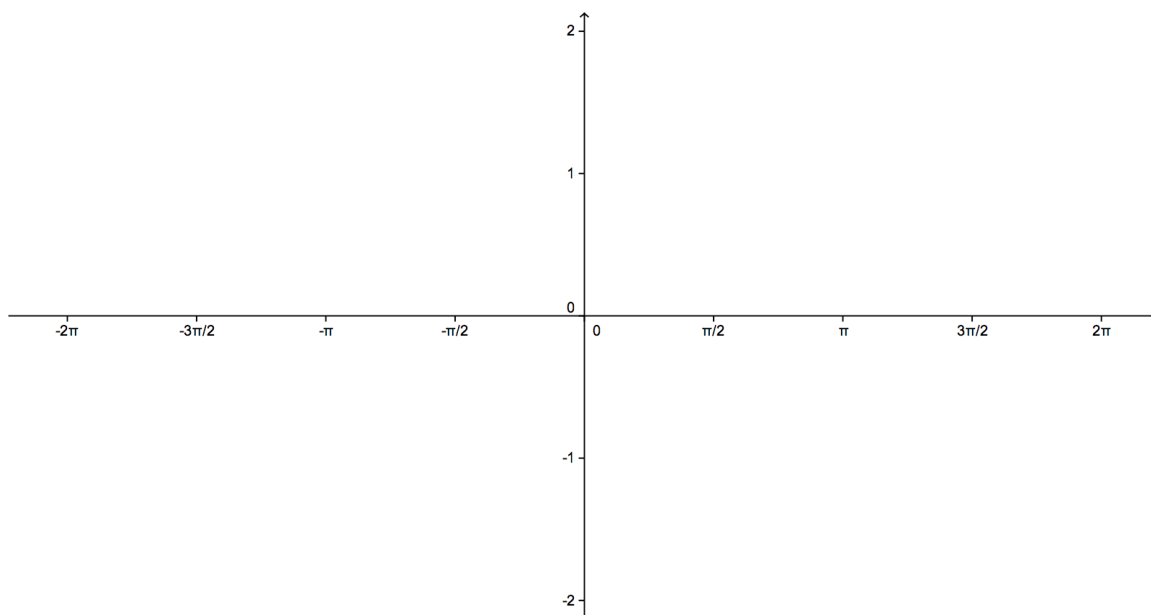
17. A sector of a circle has radius 4 ft and arclength $\frac{16\pi}{9}$. Find its sector area.

18. An 8 inch blade on an electric fan is rotating at 1800 rpm. Through how many radians does the blade turn in one minute?

19. Given $\sin \theta = 0.6$ and $\cos \theta < 0$, find the value of $\tan \theta$ without using a calculator.

20. $\tan(2\sin^{-1}(0.5)) =$

21. Graph $y=\tan \theta$. Show asymptotes and x-intercepts clearly.



22. Graph $y=\sec \theta$. It may help to draw $y=\cos \theta$ as a dotted line first.

