Chapter 7 Review Worksheet. Name _____

Review your homework from this chapter, especially the 3 worksheets. **Do your work for # 1 – 14 on a separate piece of paper.**

Calculators will not be allowed on the test.

1a. Convert 140^o to radians in terms of π

1b. Convert $\frac{5\pi}{9}$ radians to degrees.

2. In a circle of radius 6 in, a central angle cuts out an arc length 10 in. Find the measure of the central angle in radians.

3. A sector of a circle has radius 9 in and central angle of 48^o. Find its arc length and area. Give exact answer (no decimals)

4. A sector of a circle has radius 9 in and central angle of 4. Find its arc length and area. Give exact answer (no decimals)

5. Given point (-5, 12) on the terminal side of angle θ in standard position, find the 6 trig functions of angle θ in simplified rationalized radical form.

6. Given $\cos\theta = -\frac{2}{7}$ where $\pi \le \theta \le \frac{3\pi}{2}$. Find sin θ.

7. Find

a) $\cos 30°$ b) $\csc 45°$ c) $\tan 225°$

d) $\cot\frac{4\pi}{3}$ e) $\sin\frac{3\pi}{4}$ f) $\sec\frac{7\pi}{6}$

8. In radians and degrees find:

a) $\text{Cos}^{-1}\left(-\frac{1}{2}\right)$ b) $\text{Sin}^{-1}\left(-\frac{1}{2}\right)$ c) $\text{Tan}^{-1}\left(\sqrt{3}\right)$

d) $Cos^{-1}(-1)$ e) $Sin^{-1}(-1)$ f) $Tan^{-1}(-1)$

9) Find exact answers in simplified rationalized radical form.

a) $\cos\left(Sin^{-1}\frac{3}{4}\right)$ b) $\csc\left(Tan^{-1}\left(-\frac{8}{3}\right)\right)$

c) $\cot\left(Cos^{-1}\left(-\frac{48}{73}\right)\right)$ d) $\tan Cos^{-1}\left(\frac{-3}{5}\right)$

1a. $\frac{7\pi}{9}$ 1b) 100^o

2. $\frac{5}{3}$ radians

3. arc length = $\frac{12\pi}{5}$ in

Area : $\frac{54\pi}{5}$ in^2

4. arc length = 36in

Area: 162in^2

$\sin\theta = \frac{12}{13}; \csc\theta = \frac{13}{12}$

5. $\cos\theta = -\frac{5}{13}; \sec\theta = -\frac{13}{5}$

$\tan\theta = -\frac{12}{5}; \cot\theta = -\frac{5}{12}$

6. $-\frac{3\sqrt{5}}{7}$

7a. $\frac{\sqrt{3}}{2}$ b. $\sqrt{2}$

c. 1 d. $\frac{\sqrt{3}}{3}$

e. $\frac{\sqrt{2}}{2}$ f. $-\frac{2\sqrt{3}}{3}$

8a. $\frac{2\pi}{3} = 120^o$ b. $-\frac{\pi}{6} = -30^o$

c. $\frac{\pi}{3} = 60^o$ d. $\pi = 180^o$

e. $-\frac{\pi}{2} = -90^o$ f. $-\frac{\pi}{4} = -45°$

9a. $\frac{\sqrt{7}}{4}$ b. $-\frac{\sqrt{73}}{8}$

c. $-\frac{48}{55}$ d. $-\frac{4}{3}$

10. Find one positive and one negative angle that are coterminal with -115°

11. Find one positive and one negative angle that are coterminal with $-\frac{11\pi}{4}$

12. State whether each expression is positive, negative or zero.

a) $\sin 4\pi$ b) $\cos\frac{7\pi}{6}$ c) $\sin\left(-\frac{\pi}{4}\right)$

Write in terms of its reference angle.

13. $\cos -550^{o}$ 14. $\sin 1400°$

10. 245° ; -475°

11. $-\frac{3\pi}{4}$; $\frac{5\pi}{4}$

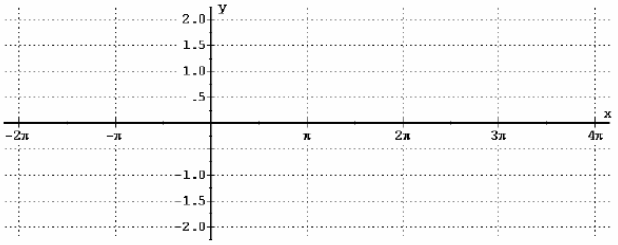
12. 0 ; Neg ; Neg

13. $-\cos 10^{o}$

14. $-\sin 40^{o}$

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

a) $y = \tan x$

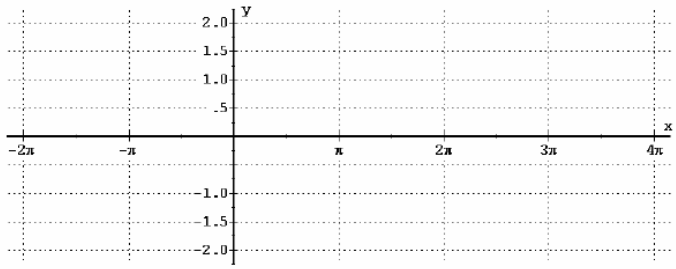


Domain: Range:

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.

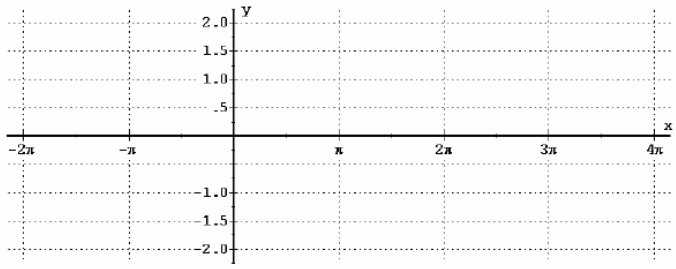
16. $y = \sin x$



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:

17. $y = \cos x$



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: