

Name Key 2017

Math 3 – Unit Circle Homework

Without using a calculator, fill in the chart using the exact values:

degrees	Radians	Coordinates	Quadrant	$\sin \theta$	$\cos \theta$	$\tan \theta$
1. 240°	$4\pi/3$	$(-\frac{1}{2}, -\frac{\sqrt{3}}{2})$	3	$-\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$	$\sqrt{3}$
2.	$\frac{3\pi}{4}$					
3. 330°	$\frac{11\pi}{6}$	$(\frac{\sqrt{3}}{2}, -\frac{1}{2})$	4	$-\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{3}}{3}$
4.				$-\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	
5. 270°	$\frac{3\pi}{2}$	$(0, -1)$	quadrantal	-1	0	undefined
6.	$\frac{11\pi}{6}$					
7. 120°	$\frac{2\pi}{3}$	$(-\frac{1}{2}, \frac{\sqrt{3}}{2})$	2	$\frac{\sqrt{3}}{2}$	$-\frac{1}{2}$	$-\sqrt{3}$
8.				0	1	
9. 330°	$\frac{11\pi}{6}$	$(\frac{\sqrt{3}}{2}, -\frac{1}{2})$	4	$-\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$-\frac{\sqrt{3}}{3}$
10.	$\frac{7\pi}{4}$					

Evaluate the following without the use of a calculator

11. $\sin(-\frac{5\pi}{6})$ $\leftarrow +2\pi$
 $\sin(\frac{7\pi}{6})$ $-\frac{1}{2}$

12. $\sin 300^\circ$

13. $\cos(-\frac{3\pi}{2})$ $\leftarrow +2\pi$
 $\cos(\frac{\pi}{2})$ 0

14. $\sin 315^\circ$

15. $\cos(-135^\circ)$ $\leftarrow +360$
 $\cos(225)$ $-\frac{\sqrt{2}}{2}$

16. $\sin 135^\circ$

17. $\cos 330^\circ$
 $\frac{\sqrt{3}}{2}$

18. $\cos \pi$

19. $\cos \frac{\pi}{2}$
 0

20. $\cos 120^\circ$

21. $\sin(-135^\circ)$ $\leftarrow +360$
 $\sin(225)$ $-\frac{\sqrt{2}}{2}$

22. $\cos 150^\circ$

23. $\cos(-150^\circ)$ $\leftarrow +360$
 $\cos(210)$ $-\frac{\sqrt{3}}{2}$

24. $\sin(-\frac{2\pi}{3})$

25. $\sin(-330^\circ)$ $\leftarrow +360$
 $\sin(30)$ $\frac{1}{2}$