Math 116 **4.1 – 4.4 Worksheet**

Non – Calculator Problems

Evaluate the given trigonometric functions.

1. $\sin\frac{\pi}{6}$ 2. $\cos\frac{\pi}{3}$ 3. $\tan 180°$ 4. $\cot 45°$ 5. $\csc\frac{\pi}{4}$ 6. $\cos\left(-\frac{41\pi}{4}\right)$

7. $\csc\frac{\pi}{6}$ 8. $\sec\frac{\pi}{3}$ 9. $\cot 180°$ 10. $\tan 45°$ 11. $\sin\frac{\pi}{4}$ 12. $\tan 0$

13. $\tan\frac{2\pi}{3}$ 14. $\cot -\frac{\pi}{6}$ 15. $\sin 2\pi$ 16. $\cos\frac{3\pi}{4}$ 17. $\cos 1350°$ 18. $\sec(-150°)$

For each of the following, give the missing angle(s) from $[0, 2\pi)$.

19. $\cos\theta = \frac{\sqrt{2}}{2}$ 20. $\csc\alpha = \frac{2\sqrt{3}}{3}$ 21. $\sin\beta = 0$ 22. $\tan\delta = 1$

23. $\cos t = -\frac{1}{2}$ 24. $\sin\theta = -\frac{\sqrt{3}}{2}$ 25. $\cot\beta = \sqrt{3}$ 26. $\csc\theta$ is undefined

27. $\sec t = 2$ 28. $\sin\phi = \frac{1}{2}$ 29. $\cos\theta = -\frac{\sqrt{3}}{2}$ 30. $\cot\alpha$ is undefined

Determine whether the function is even, odd, or neither.

31. $\tan t$ 32. $x^2\cos(x)$ 33. $x^3 + \sin x$ 34. $\sin\theta\csc\theta$

35. $\sin(2x)$ 36. $x\cos x$ 37. $x\sin x$ 36. $\tan x\cos x$

Evaluate the given expressions.

37. $\sin\frac{\pi}{3}-\tan\frac{\pi}{4}$

38. $\csc\frac{\pi}{3}\sin\frac{\pi}{3}$

39. $\sin 7\pi+\cos\frac{11\pi}{2}$

40. $\cos^2(38°)+\sin^2(38°)$

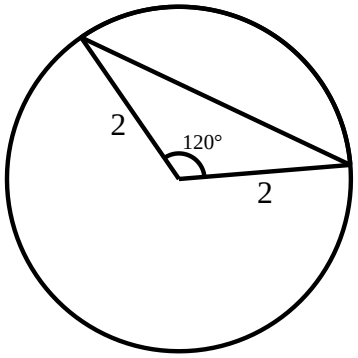
41. $\cos^2\frac{\pi}{2}-\sin^2\frac{\pi}{2}$

42. $\sin 30°\cos 60°+\sin 60°\cos 30°$

43. The area of a triangle can be found using the formula $A=\frac{1}{2}ab\sin\theta$ (theta is in degrees).

The area of a sector can be found using the formula $A=\frac{1}{2}r^2\theta$ (theta is in radians).

Using this information, find the exact value of the area of the shaded region in the figure below.



Calculator Problems

44. $\sin\frac{\pi}{7}$

45. $\csc\frac{\pi}{3}$

46. $\cos\frac{13\pi}{8}$

47. $\tan 5$

48. $\sin 75°$

49. $\sec 49°$

50. $\cot 900°$

51. $\cos 0°$

52. $\sin 30°15'$

53. $\cos 54°13'20''$

54. $\sin^{-1}(1)$

55. $\tan^{-1}(-1)$