

NO calculator!

27-50
Show all steps!!

*Show work!

Show both steps!

- 1) The value of $\sin \frac{4\pi}{3}$ is
- 2) Find the exact value of $\sin \frac{13\pi}{6}$.
- 3) Find the exact value of $\cos (-\frac{\pi}{4})$.
- 4) Find the exact value of $\sin (-\frac{2\pi}{3})$.
- 5) Find the exact value of $\tan (-\frac{5\pi}{4})$.
- *6) The value of $\sin \frac{3\pi}{2} + \cos \frac{2\pi}{3}$ is
- *7) The numerical value of $\sin \frac{3\pi}{2} + \cos \frac{\pi}{4}$ is
- *8) The value of $\sin \frac{\pi}{6} + \tan \frac{\pi}{4}$ is
- *9) What is the value of $\tan \frac{\pi}{3} + \cos \pi$?
- *10) The value of $\cos \frac{\pi}{3} - \sin \frac{3\pi}{2}$ is
- 11) For which value of θ is the expression $\frac{2}{\tan \theta - 1}$ undefined?
- 12) For which value of θ is the fraction $\frac{1}{\cos \theta}$ undefined?
- 13) Evaluate: $(2 \text{ Arc tan } 1)$
- 14) The value of $\text{Arc sin } (-1)$ is
- 15) The value of $2(\text{Arc sin } 1)$ is
- 16) If $\theta = \text{Arc cos } (\frac{\sqrt{2}}{2})$, what is the value of $\tan \theta$?
- 17) The value of $\cos (\text{Arc tan } \sqrt{3})$ is
- 18) The value of $\sin (\text{Arc cos } 1)$ is
- 19) What is the value of $\sin (\text{Arc cos } \frac{1}{2})$?
- 20) The value of $\tan (\text{Arc sin } \frac{\sqrt{3}}{2})$ is
- 21) Evaluate: $\cos (\text{Arc sin } \frac{\sqrt{3}}{2})$
- 22) Evaluate: $\cos (\text{Arc sin } (-1))$
- 23) Evaluate: $\cos (\text{Arc tan } [-1])$
- 24) Find the value of the expression, $\text{Arc sin } (\tan [-\frac{\pi}{4}])$, in radians.
- 25) Find the value of the expression, $\text{Arc cos } (\sin -\frac{\pi}{3})$, in radians.
- 26) Find the value of the expression, $\text{Arc tan } (\sin \frac{3\pi}{2})$, in radians.

use principal values
#11-26

- 27) At $x = \frac{\pi}{2}$, the difference $2 \sin x - \cos (2x)$ is
- 28) If $g(x) = \tan (x - \frac{\pi}{2})$, the value of $g(\pi)$ is
- 29) If $f(x) = \cos \frac{x}{3} + \sin x$, then $f(\pi)$ equals
- 30) If $f(x) = \sin^2 x$, then $f(\frac{\pi}{2})$ equals
- 31) If $f(x) = \sin \frac{x}{4}$, then $f(\pi)$ equals
- 32) If $f(x) = 4 \cos 3x$, what is the value of $f(\frac{\pi}{4})$?
- 33) If $f(x) = \cos 3x + \sin x$, then $f(\frac{\pi}{2})$ equals
- 34) Evaluate: $\sec 0 + \csc \frac{\pi}{2}$
- 35) Evaluate: $\csc \frac{3\pi}{2} - \sec \pi$
- 36) Evaluate: $\cot \frac{\pi}{2} \tan \pi$
- 37) Evaluate: $\sec^2 \pi - 2 \cot \frac{\pi}{2}$
- 38) Evaluate: $\sin^2 \frac{\pi}{3} - \tan \frac{\pi}{4}$
- 39) Evaluate: $2 \cos \frac{\pi}{3} \tan \frac{\pi}{6}$
- 40) Evaluate: $\csc \frac{\pi}{6} - \sec \frac{\pi}{3}$
- 41) Evaluate: $\cot \frac{\pi}{3} \sin \frac{\pi}{3}$
- 42) Evaluate: $2 \tan \frac{\pi}{4} + \sin \frac{\pi}{2}$
- 43) Evaluate: $(3 \tan \frac{\pi}{6} - \cos \frac{3\pi}{2}) \div (\cot \frac{\pi}{4})$
- 44) Evaluate: $\frac{\csc \frac{3\pi}{2} \tan \frac{\pi}{3}}{\sec^2 \frac{\pi}{3}}$
- 45) Evaluate: $\sin (\text{Arc cos } [-\frac{\sqrt{3}}{2}])$
- 46) Evaluate: $\tan (\text{Arc sin } [-\frac{1}{2}])$
- 47) Evaluate: $\sin (2 \text{ Arc cos } [-\frac{\sqrt{3}}{2}])$
- 48) Evaluate: $\cos (2 \text{ Arc tan } [\sqrt{3}])$
- 49) Find the value of the expression, $\text{Arc cos } (\sin \frac{\pi}{3})$, in radians.
- 50) Find the value of the expression, $\text{Arc sin } (\tan \frac{\pi}{4})$, in radians.

Principal Values!

check answers !!

#1-15

$$\pi \quad \frac{\pi}{4} \quad \frac{\pi}{2} \quad \frac{\pi}{2} \quad -\frac{\pi}{2} \text{ or } \frac{3\pi}{2}$$

$$-\frac{1}{2} \quad -1 \quad \frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}$$

$$\sqrt{3}-1 \quad -1+\frac{\sqrt{2}}{2} \quad -\frac{\sqrt{3}}{2} \quad -\frac{\sqrt{3}}{2} \quad \frac{\sqrt{2}}{2}$$

#16-26

$$0 \quad 0 \quad \frac{1}{2} \quad \frac{1}{2} \quad 1 \quad \frac{\sqrt{2}}{2} \quad \frac{\sqrt{3}}{2} \quad \sqrt{3}$$

$$-\frac{\pi}{4} \text{ or } \frac{7\pi}{4} \quad \frac{5\pi}{6} \quad -\frac{\pi}{2} \text{ or } \frac{3\pi}{2}$$

#27-38

$$-\frac{1}{4} \quad 0 \quad 0 \quad \frac{1}{2} \quad 1 \quad 1 \quad 2 \quad 3$$

$$\text{undefined} \quad -2\sqrt{2} \quad \frac{\sqrt{2}}{2}$$

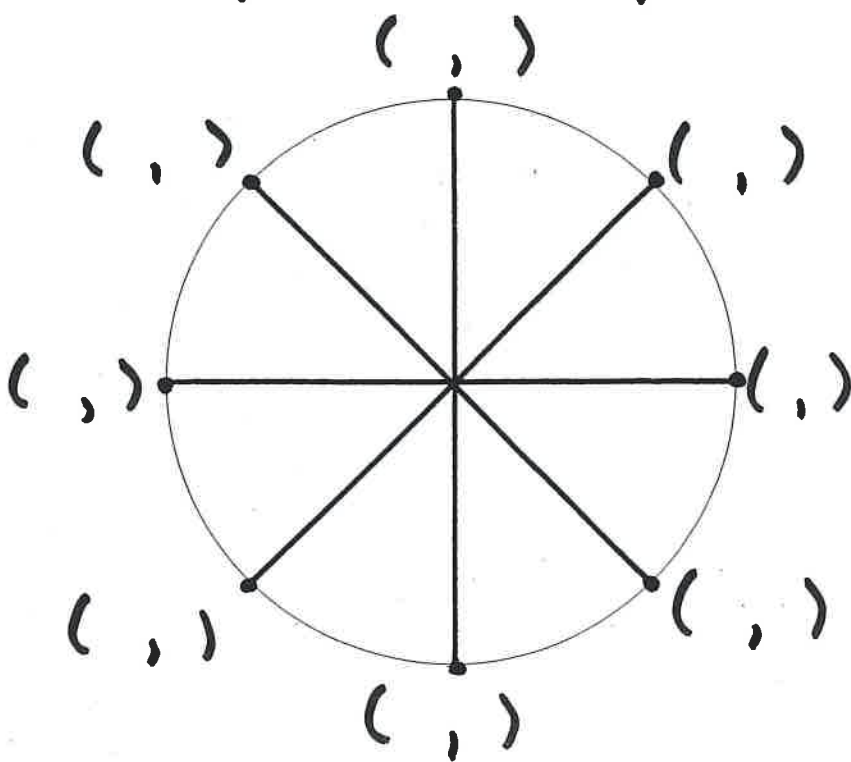
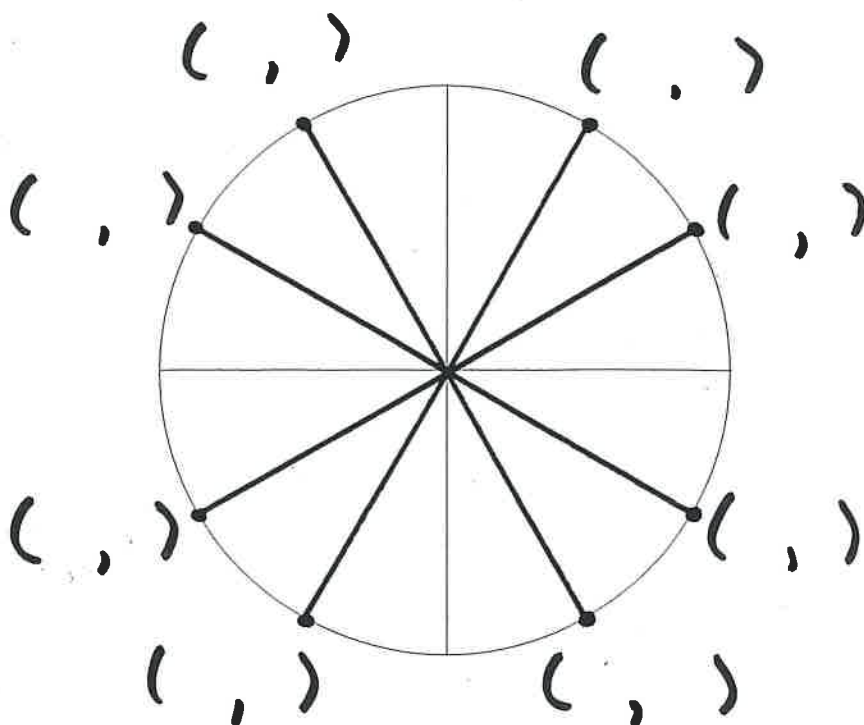
#39-50

$$\frac{\pi}{6} \quad \frac{\pi}{2}$$

$$-\frac{1}{2} \quad 0 \quad \frac{1}{2} \quad \frac{1}{2} \quad 3$$

$$-\frac{\sqrt{3}}{2} \quad -\frac{\sqrt{3}}{3} \quad -\frac{\sqrt{3}}{4} \quad \frac{\sqrt{3}}{3} \quad \sqrt{3}$$

Unit Circle worksheet
#1-50



Reminder: Principal Values

$$\begin{array}{l} \sin x \\ \tan x \end{array} > -\frac{\pi}{2} \leq x \leq \frac{\pi}{2} \quad \text{Quad I, IV}$$

$$\cos x \quad 0 \leq x \leq \pi \quad \text{Quad I, II}$$