

Key

Math 4

Name _____

Date _____

U4 Exact Values Learn Check 2

Find the values below without using a calculator. Feel free to sketch circles/triangles if it helps.

1. $\sin\left(\frac{\pi}{3}\right) = \frac{\sqrt{3}}{2}$

6. $\tan\left(\frac{\pi}{2}\right) = \text{Undefined}$

2. $\cos(0) = 1$


7. $\sin\left(\frac{3\pi}{2}\right) = -1$

3. $\sin\left(\frac{\pi}{4}\right) = \frac{\sqrt{2}}{2}$

8. $\sin\left(\frac{11\pi}{6}\right) = -\frac{1}{2}$

4. $\cos\left(\frac{5\pi}{6}\right) = -\frac{\sqrt{3}}{2}$

9. $\tan\left(\frac{5\pi}{4}\right) = \frac{-\frac{\sqrt{2}}{2}}{\frac{-\sqrt{2}}{2}} = 1$



5. $\tan\left(\frac{5\pi}{6}\right) = \frac{\frac{1}{2}}{\frac{-\sqrt{3}}{2}} = -\frac{1}{\sqrt{3}}$

10. $\tan(\pi) = \frac{0}{-1} = 0$

OVER →

11. $\cos x = \frac{1}{2}$



$$x = \frac{\pi}{3}$$

$$x = \frac{5\pi}{3}$$

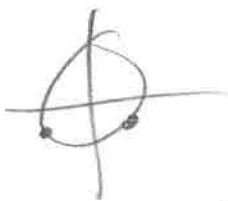
12. $\sin x = -\frac{\sqrt{3}}{2}$



$$x = \frac{4\pi}{3}$$

$$x = \frac{5\pi}{3}$$

13. $\sin x = -\frac{1}{2}$



$$x = \frac{7\pi}{6}$$

$$x = \frac{11\pi}{6}$$

14. $\tan x = -\sqrt{3}$



$$= -\frac{\sqrt{3}}{2} = \frac{\frac{\sqrt{3}}{2}}{\frac{1}{2}} \text{ or } \frac{\frac{\sqrt{3}}{2}}{-\frac{1}{2}} = \frac{\sin}{\cos}$$

$$x = \frac{2\pi}{3}; x = \frac{5\pi}{3}$$

Answer Bank for problems 1-10:

- A) $\frac{1}{2}$ B) $-\frac{1}{2}$ C) $\frac{\sqrt{2}}{2}$ D) $-\frac{\sqrt{2}}{2}$ E) $\frac{\sqrt{3}}{2}$ F) $-\frac{\sqrt{3}}{2}$ G) 0
- H) $\sqrt{3}$ I) $-\sqrt{3}$ J) $\frac{1}{\sqrt{3}}$ K) $-\frac{1}{\sqrt{3}}$ L) 1 M) -1
- N.) undefined

Answer Bank for problems 11-14:

- A) 0 B) $\frac{\pi}{6}$ C) $\frac{\pi}{4}$ D) $\frac{\pi}{3}$ E) $\frac{\pi}{2}$ F) $\frac{2\pi}{3}$ G) $\frac{3\pi}{4}$
- H) $\frac{5\pi}{6}$ I) π J) $\frac{7\pi}{6}$ K) $\frac{5\pi}{4}$ L) $\frac{4\pi}{3}$ M) $\frac{3\pi}{2}$ N) $\frac{5\pi}{3}$
- O) $\frac{7\pi}{4}$ P) $\frac{11\pi}{6}$