

## 10350 Circle Definition of Trigonometric Functions - Sample Questions Set 15

Write down the following trigonometric values in terms of the trigonometric values of its reference angle. Indicate clearly whether the value is positive or negative.

(1)  $\sin\left(\frac{5\pi}{4}\right) \stackrel{?}{=}$

$\cos\left(\frac{5\pi}{4}\right) \stackrel{?}{=}$

$\tan\left(\frac{5\pi}{4}\right) \stackrel{?}{=}$

(2)  $\sin\left(-\frac{3\pi}{4}\right) \stackrel{?}{=}$

$\cos\left(-\frac{3\pi}{4}\right) \stackrel{?}{=}$

$\tan\left(-\frac{3\pi}{4}\right) \stackrel{?}{=}$

(3)  $\sin\left(-\frac{\pi}{3}\right) \stackrel{?}{=}$

$\cos\left(-\frac{\pi}{3}\right) \stackrel{?}{=}$

$\tan\left(-\frac{\pi}{3}\right) \stackrel{?}{=}$

(4)  $\sin\left(\frac{17\pi}{6}\right) \stackrel{?}{=}$

$\cos\left(\frac{17\pi}{6}\right) \stackrel{?}{=}$

$\tan\left(\frac{17\pi}{6}\right) \stackrel{?}{=}$

(5) Without using a calculator, find the exact numerical value of the following trigonometric value.

$$\sin\left(\frac{17\pi}{6}\right) \stackrel{?}{=}$$

$$\cos\left(\frac{17\pi}{6}\right) \stackrel{?}{=}$$

$$\tan\left(\frac{17\pi}{6}\right) \stackrel{?}{=}$$

(6) Given that  $\sin\left(\frac{\pi}{12}\right) = \sqrt{\frac{2-\sqrt{3}}{4}}$ . Without using a calculator, find the exact numerical value of the following trigonometric value.

$$(6a) \cos\left(\frac{\pi}{12}\right) \stackrel{?}{=}$$

$$(6c) \cos\left(\frac{11\pi}{12}\right) \stackrel{?}{=}$$

$$(6b) \tan\left(\frac{\pi}{12}\right) \stackrel{?}{=}$$

$$(6d) \tan\left(\frac{47\pi}{12}\right) \stackrel{?}{=}$$