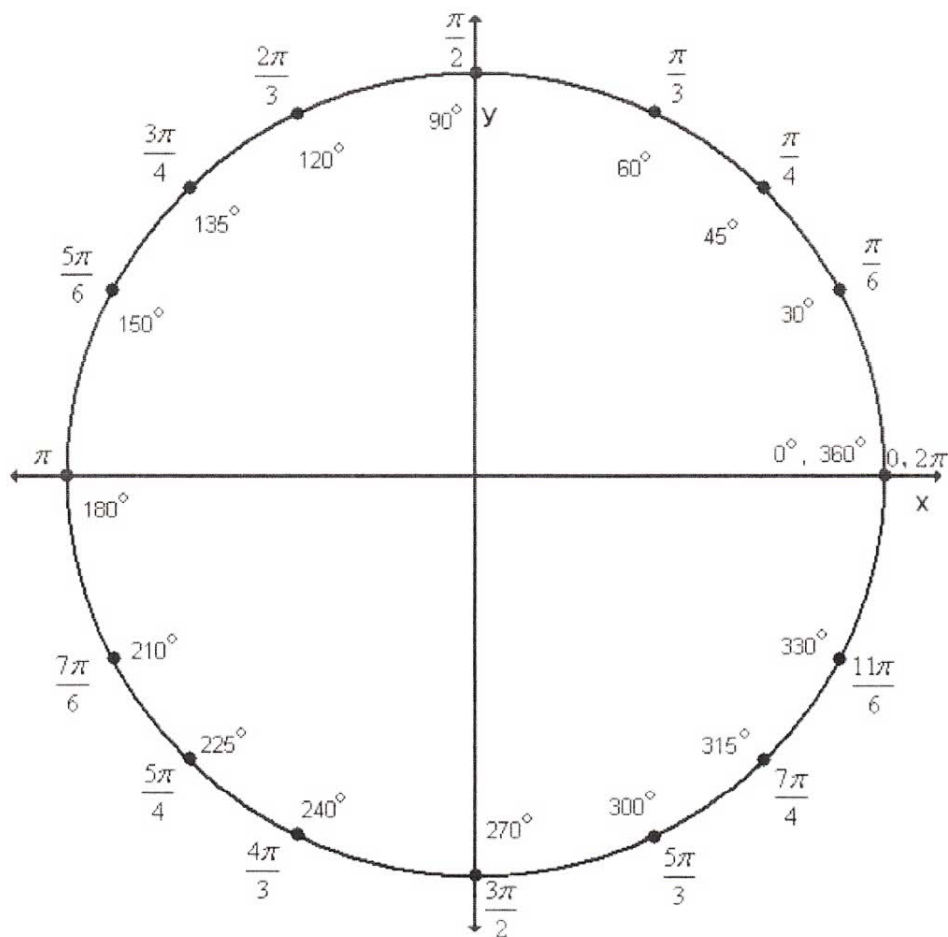# UNIT 6 WORKSHEET 8
USING THE UNIT CIRCLE

Use the unit circle above to find the **exact** value of each of the following. (Exact value means no decimal approximations.)

A) $\tan\dfrac{11\pi}{4} =$ -1

B) $\cos\dfrac{5\pi}{3} =$ $\dfrac{1}{2}$

C) $\cos(-\pi) =$ -1

D) $\sin\left(-\dfrac{11\pi}{6}\right) =$ $-\dfrac{1}{2}$

E) $\tan\left(-\dfrac{10\pi}{3}\right) = -\dfrac{\sqrt{3}}{3}$

F) $\csc\dfrac{7\pi}{3} = \dfrac{2\sqrt{3}}{3}$

G) $\sec\left(\dfrac{16\pi}{3}\right) =$ $-\dfrac{1}{2}$

H) $\cos\left(-\dfrac{11\pi}{3}\right) =$ $\dfrac{1}{2}$

I) $\sin\dfrac{13\pi}{4} =$ $-\dfrac{\sqrt{2}}{2}$

J) $\csc\left(-\dfrac{\pi}{6}\right) =$ -2

K) $\tan\left(-3\pi\right) =$ 0

L) $\cot\dfrac{3\pi}{2} =$ 0

M) $\sec\left(-\dfrac{\pi}{3}\right) =$ 2

N) $\cot\dfrac{3\pi}{4} =$ -1

O) $\cot 20\pi =$ $undef$

P) $\cos\left(-\dfrac{7\pi}{2}\right) =$ 0

Q) $\sin\left(-\dfrac{21\pi}{4}\right) =$ $\dfrac{\sqrt{2}}{2}$

R) $\cot 0 =$ $undef$

S) $\sin\left(-4\pi\right) =$ 0

T) $\cot\dfrac{17\pi}{3} =$ $-\dfrac{2\sqrt{3}}{3}$

U) $\cos\dfrac{4\pi}{3} =$ $-\dfrac{1}{2}$

V) Find all angles θ in the interval $[0, 2\pi)$ that satisfy the expression:

$\sin\theta = \dfrac{\sqrt{3}}{2}$ $\theta = \underline{\ 60°,\ 120°\ }$

$\dfrac{\pi}{3}\ ),\ \dfrac{2\pi}{3}$

W) Find all angles θ in the interval $[0, 2\pi)$ that satisfy the expression:

$\sec\theta = -2$ $\theta = \underline{\ 120°,\ \ 240°\ }$

$\dfrac{2\pi}{3}\ ),\ \dfrac{4\pi}{3}$

X) Find all angles θ in the interval $[0, 2\pi)$ that satisfy the expression:

$\tan\theta = -1$ $\theta = \underline{\ 135°,\ 315°\ }$

$\dfrac{2\pi}{3}\ ),\ \dfrac{4\pi}{3}$

Y) Find all angles θ in the interval $[0, 2\pi)$ that satisfy the expression:

$\csc\theta = undefined$ $\theta = \underline{\ 90°,\ 270°\ }$

$\dfrac{\pi}{2}\ ),\ \dfrac{3\pi}{2}$