

Name:

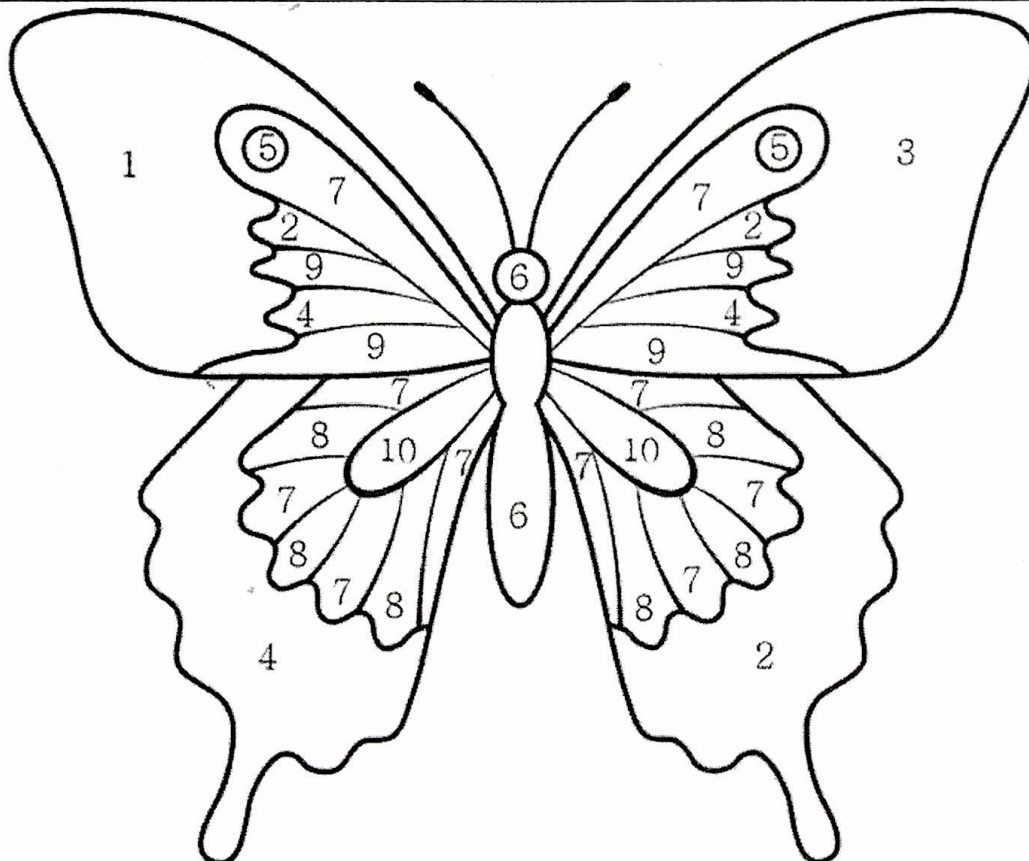
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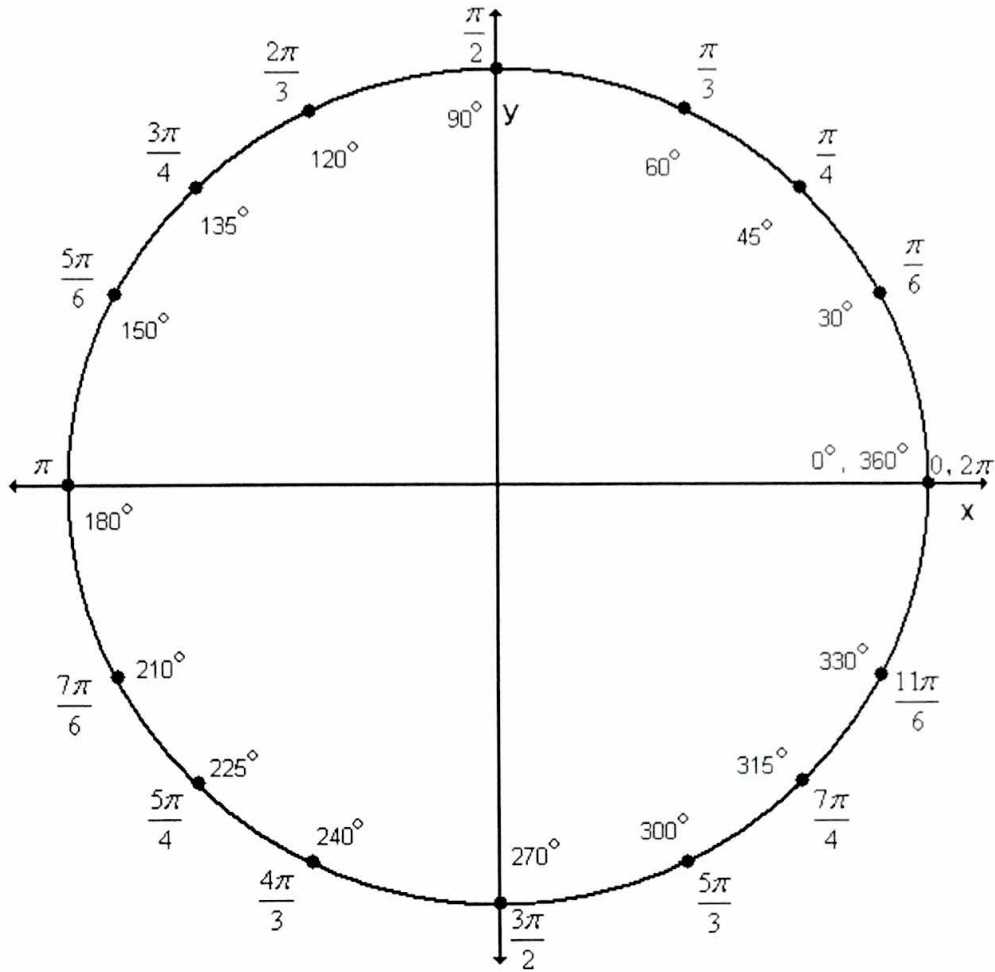
Color-by-numbers Practice: Trig Ratios on the Unit Circle

Evaluate each trig ratio. Simplify answers completely and show work. Use the answers to color in the picture.

1] $\sin -210^\circ$	4] $\csc \frac{-2\pi}{3}$	7] $\cot \frac{-\pi}{6}$	10] $\cos 450^\circ$
2] $\sec \frac{7\pi}{4}$	5] $\tan \frac{7\pi}{2}$	8] $\sin -600^\circ$	$\frac{\sqrt{3}}{3} = \text{yellow}$ $-\frac{\sqrt{2}}{2} = \text{red}$ $-2 = \text{purple}$ $-1 = \text{light green}$ $-\sqrt{3} = \text{light green}$ $\frac{\sqrt{3}}{2} = \text{dark green}$ $-\frac{\sqrt{3}}{2} = \text{red}$
3] $\tan 390^\circ$	6] $\sec \frac{-10\pi}{3}$	9] $\cos \frac{-5\pi}{6}$	



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) $\tan \frac{11\pi}{4} =$

B) $\cos \frac{5\pi}{3} =$

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

D) $\sin\left(-\frac{11\pi}{6}\right) =$

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

F) $\csc \frac{7\pi}{3} =$

G) $\sec\left(\frac{16\pi}{3}\right) =$

H) $\cos\left(-\frac{11\pi}{3}\right) =$

I) $\sin \frac{13\pi}{4} =$

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

K) $\tan(-3\pi) =$

L) $\cot\frac{3\pi}{2} =$

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

N) $\cot\frac{3\pi}{4} =$

O) $\cot 20\pi =$

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

Q) $\sin\left(-\frac{21\pi}{4}\right) =$

R) $\cot 0 =$

S) $\sin(-4\pi) =$

T) $\cot\frac{17\pi}{3} =$

U) $\cos\frac{4\pi}{3} =$

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

$$\sin \theta = \frac{\sqrt{3}}{2} \quad \theta = \underline{\hspace{4cm}}$$

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

$$\sec \theta = -2 \quad \theta = \underline{\hspace{4cm}}$$

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

$$\tan \theta = -1 \quad \theta = \underline{\hspace{4cm}}$$

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

$$\csc \theta = \text{undefined} \quad \theta = \underline{\hspace{4cm}}$$