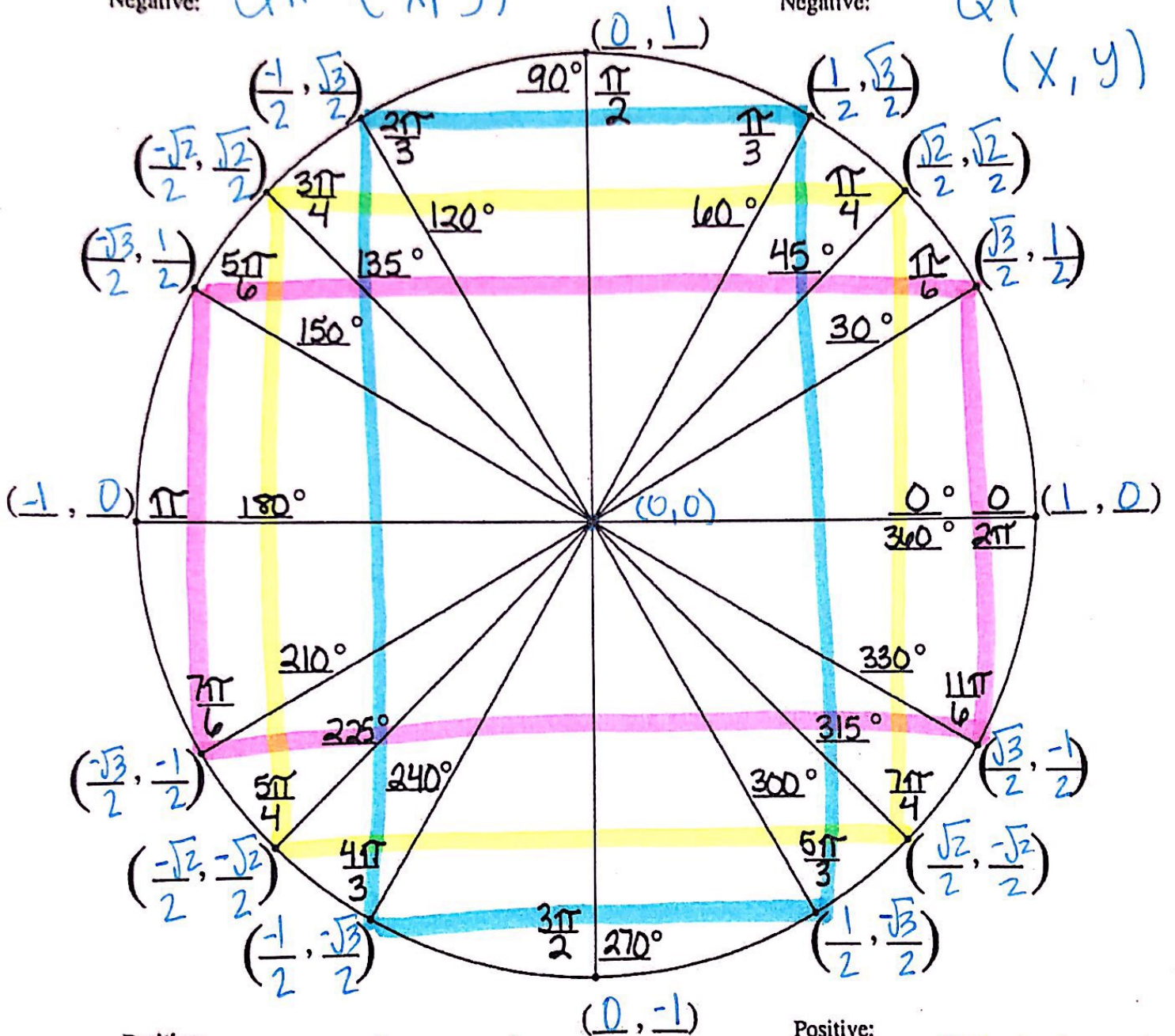


radius = 1

Fill in The Unit Circle

Positive: QII (-x, y)
Negative:

Positive: QI (x, y)
Negative:



Positive: QIII (-x, -y)
Negative:

Positive: QIV (x, -y)
Negative:

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7.4: Exact Values of Trig Functions

- on the unit circle

x-coordinates are cosine values
y-coordinates are sine values

Determine

$$\text{Ex 1) } \cos 60^\circ = \boxed{\frac{1}{2}}$$

$$\text{Ex 2) } \sin \frac{7\pi}{4} = \boxed{\frac{-\sqrt{2}}{2}}$$

$$\text{Ex 3) } \sin 480^\circ = \sin 120^\circ = \boxed{\frac{\sqrt{3}}{2}}$$

* If angle is not on the unit circle,
use the coterminal angle

$$480^\circ - 360^\circ = 120^\circ$$

+/- 360 for degrees

+/- 2π for radians

$$\text{Ex 4) } \cos(-5\pi) = \cos \pi = \boxed{-1}$$

$$-5\pi + 2\pi = -3\pi + 2\pi = -\pi + 2\pi = \pi$$

On the unit circle: $\frac{y}{x}$ are tangent values $\frac{\sin}{\cos}$

$$\text{Ex 5) } \tan 315^\circ = \frac{-\sqrt{2}}{2} \div \frac{\sqrt{2}}{2} = \frac{-\sqrt{2}}{2} \cdot \frac{2}{\sqrt{2}} = \boxed{-1}$$

* keep, change, flip

$$\text{Ex 6) } \tan 150^\circ = \frac{1}{2} \div \frac{-\sqrt{3}}{2} = \frac{1}{2} \cdot \frac{2}{-\sqrt{3}} = \boxed{\frac{-1}{\sqrt{3}}}$$