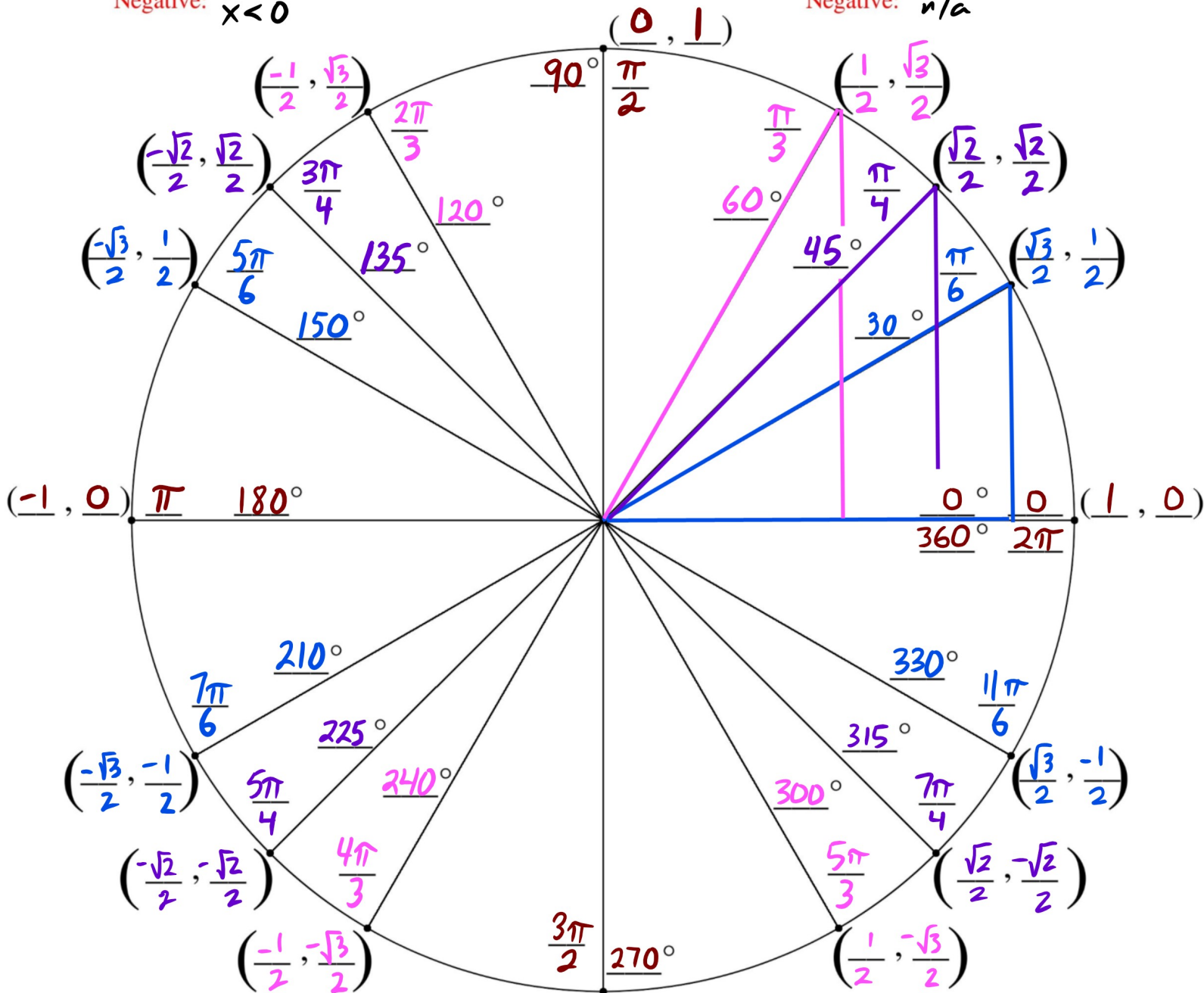


Fill in The Unit Circle

Positive: $y > 0$
 Negative: $x < 0$

Positive: $x > 0, y > 0$
 Negative: n/a

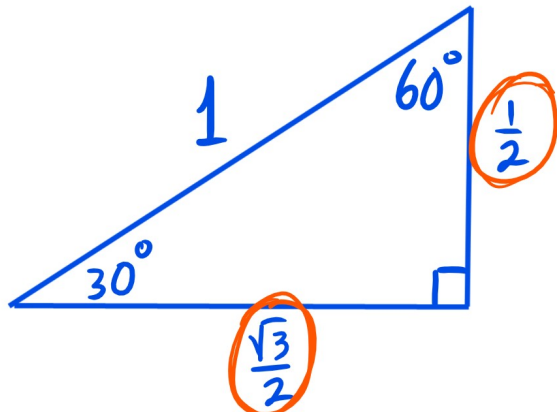


Positive: n/a
 Negative: $x < 0, y < 0$

Positive: $x > 0$
 Negative: $y < 0$

30°-60°-90°

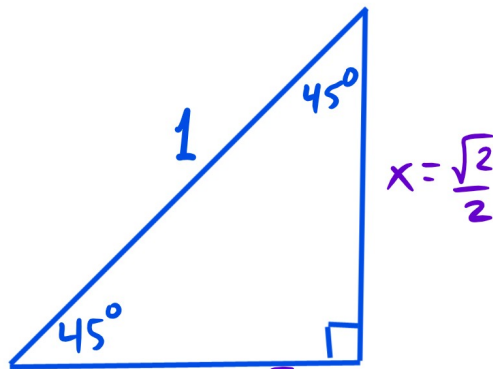
short leg = $\frac{1}{2} \cdot \text{hyp}$
long leg = $\sqrt{3} \cdot \text{short leg}$



$$\sin 30^\circ = \frac{\frac{1}{2}}{1} = \frac{1}{2}$$

$$\cos 30^\circ = \frac{\frac{\sqrt{3}}{2}}{1} = \frac{\sqrt{3}}{2}$$

45°-45°-90°



$$x = \frac{\sqrt{2}}{2}$$

$$x^2 + x^2 = 1^2$$

$$2x^2 = 1$$

$$x^2 = \frac{1}{2}$$

$$x = \sqrt{\frac{1}{2}} = \frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

ON UNIT CIRCLE:

$$\sin \theta = y \quad \csc \theta = \frac{1}{y}$$

$$\cos \theta = x \quad \sec \theta = \frac{1}{x}$$

$$\tan \theta = \frac{y}{x} \quad \cot \theta = \frac{x}{y}$$

p395
10-35 multiples of 5,
41, 44

Find six trig function values

of $\theta = \frac{17\pi}{6}$

$(-\frac{\sqrt{3}}{2}, \frac{1}{2})$

$$\csc \frac{17\pi}{6} = \frac{2}{1} = 2$$

$$\sin \frac{17\pi}{6} = \frac{1}{2}$$

$$\sec \frac{17\pi}{6} = \frac{-2}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$$

$$= \frac{-2\sqrt{3}}{3}$$

$$\cos \frac{17\pi}{6} = -\frac{\sqrt{3}}{2}$$

$$\tan \frac{17\pi}{6} = \frac{\frac{1}{2}}{-\frac{\sqrt{3}}{2}} = \frac{1}{2} \left(\frac{-2}{\sqrt{3}} \right) = \frac{-1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}}$$

$$= -\frac{\sqrt{3}}{3}$$

$$\cot \frac{17\pi}{6} = -\sqrt{3}$$