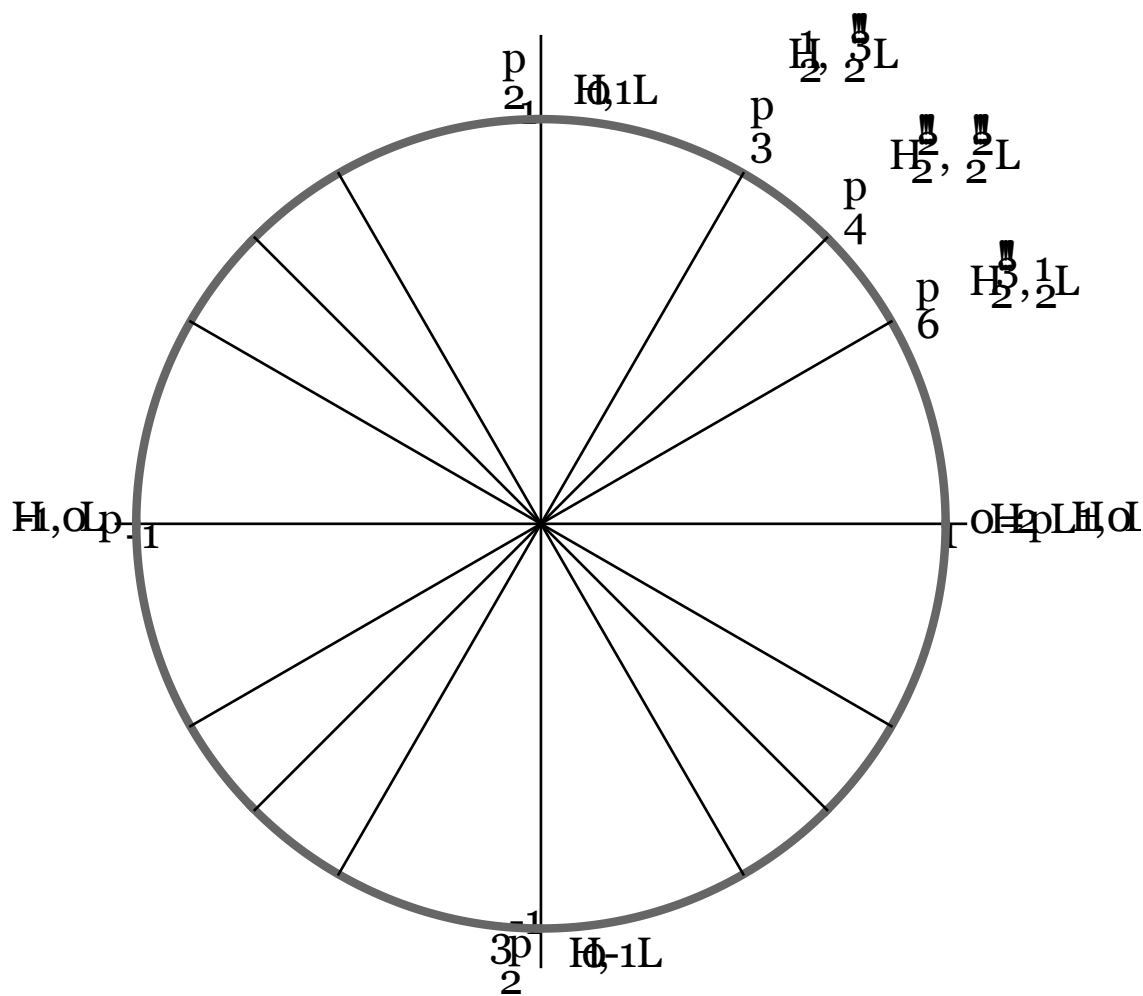


## Workshop Exercises: Trigonometry

1. Complete the unit circle below.



2. Evaluate.

a)  $\cos \frac{5\pi}{4}$ .

e)  $\cos\left(\frac{-17\pi}{4}\right)$ .

b)  $\csc \frac{11\pi}{6}$ .

f)  $\tan \frac{23\pi}{3}$ .

c)  $\cot\left(-\frac{4\pi}{3}\right)$ .

g)  $\sec\left(-\frac{23\pi}{3}\right)$ .

d)  $\sin \frac{9\pi}{4}$ .

h)  $\sin \frac{55\pi}{6}$ .

3. (Optional) Solve the following trigonometric equations. If no domain is indicated, find all solutions.

a)  $2 \sin x = \sqrt{3}$ .

b)  $2 \sin 2x = \sqrt{3}$ .

c)  $2 \sin 2x = \sqrt{3}$  for  $x$  in  $[0, 2\pi)$ .

d)  $2 \sin^2 2x + \sin 2x = 1$ .

4. Graph the 6 trigonometric functions.