Trig Defined

While working in a group make sure you:

- Expect to make mistakes but be sure to reflect/learn from them!
- Are civil and are aware of your impact on others.
- Assume and engage with the strongest argument while assuming best intent.

The remaining four trigonometric functions:

Name	Notation	Definition
tangent	$\tan(\theta)$	$\dfrac{\sin(\theta)}{\cos(\theta)}$
secant	$\sec(\theta)$	$\dfrac{1}{\cos(\theta)}$
cosecant	$\csc(\theta)$	$\dfrac{1}{\sin(\theta)}$
cotangent	$\cot(\theta)$	$\dfrac{1}{\tan(\theta)}$

1. Find the following:

   $\tan\left(\frac{\pi}{4}\right)$ $\cot\left(\frac{17\pi}{4}\right)$

2. If $\cos(\theta) = \frac{1}{24}$ find:

   $\sec(\theta)$ $\cos(\theta + 2\pi)$ $\cos(-\theta)$

3. Let $\pi < \theta < \frac{3\pi}{2}$ and $\cos\theta = \frac{-8}{17}$. Find the exact value of $\sin\theta$.

4. If $\tan(\phi) = 3$, what possible values could $\sec(\phi)$ be?

5. Draw $\sin\theta$, on the axes below.