Trig Practice

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.

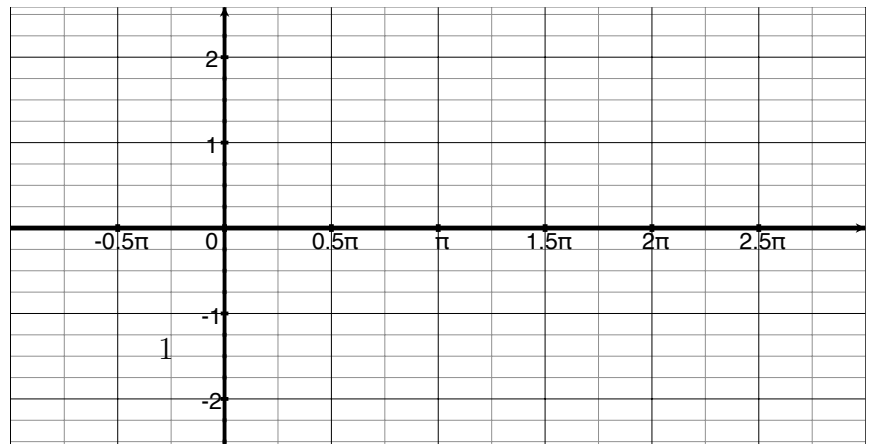1. Let $\pi < \theta < \frac{3\pi}{2}$ and $\cos\theta = \frac{-8}{17}$.

   (a) There are at least two ways you can find the exact value of $\sin\theta$. Employ one of these methods to find $\sin\theta$.

   (b) Find one other method you could have used to answer (a). Explain each, step by step below. (Consider asking another group since they might have employed one a method different from yours.)

   (c) Find the exact value of $\sec(\theta) + \tan(\theta)$.

2. Draw $\sin\theta$ on the axes.

3. Draw $3\sin(2\theta) + 3$.

4. Find the exact values of each expression below:
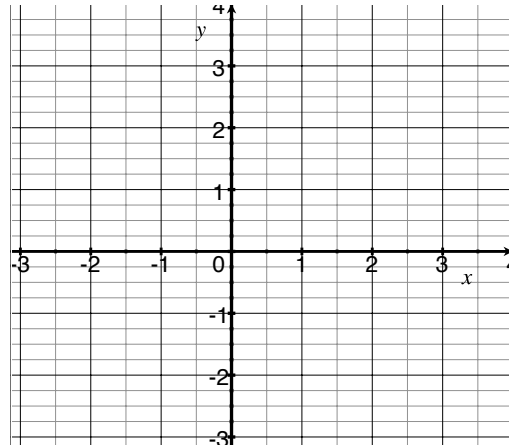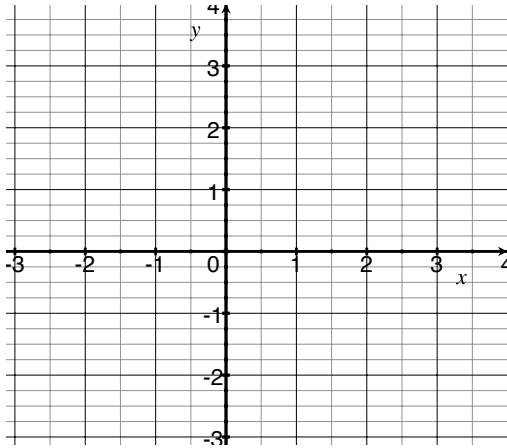
   (a) $\arcsin \frac{1}{\sqrt{2}}$.

   (b) $\sin^{-1} \frac{-1}{\sqrt{2}}$.

   (c) $\cos^{-1} \frac{1}{2}$

   (d) $\cos(\sin^{-1} \frac{4}{7})$

   Note, that the last one can be completed in at least two different ways.

5. Draw the graph of $\arccos x$ and $\arctan x$ below.

6. Draw the graph of $\frac{1}{2} \arccos x - 1$ and $\arctan \frac{1}{3}x$ below.