1. Solve for $r$ below:

![Triangle with 30° angle and a side of 10]

2. Write $\sin \theta$ as a function of $x$:

![Triangle with $\theta$, $x$, and 1]

3. Find all six trig functions of the angle that passes through the point $(4, -8)$.

4. Find all six trig functions of the angle $\theta$ where $\cot \theta = -3$ and $\cos \theta < 0$.

5. Sketch the graph of the function $y = -3 \cos 2\pi x$, including two full periods.

6. Now sketch two full periods of $y = -3 \sec 2\pi x$.

7. Sketch the graph of $y = \tan \frac{\pi}{2} x$ including two full periods.

8. Evaluate, without using a calculator, $\arcsin \left( -\frac{1}{\sqrt{2}} \right)$. Give an answer as a multiple of $\pi$.

9. Sketch a right triangle to find an exact value of $\cos (\arcsin \frac{5}{13})$. 