Show work for the first 3 problems; use the back of the sheet if necessary. Results should, when necessary, be left in the form of unsimplified square roots.

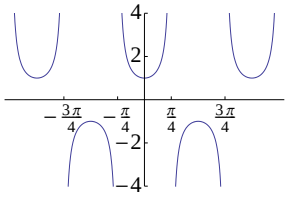
1. **(2 points)** Find the value of $\cos \frac{13\pi}{4}$.

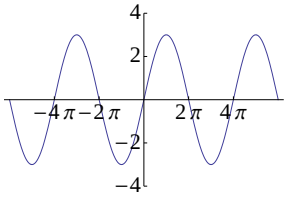
2. **(3 points)** Find the value of $\csc \frac{-4\pi}{3}$.

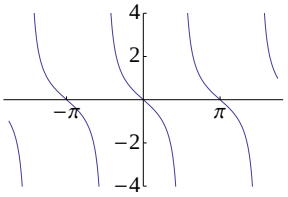
3. **(3 points)** If $\sin t = \frac{-3}{5}$ and the terminal point determined by t is in the third quadrant, what is $\tan t$?

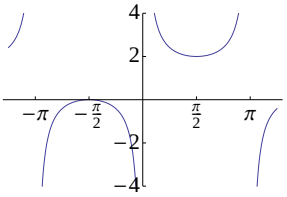
4. **(2 points)** Given that $\sin t = \frac{7}{25}$ and $\cos t = \frac{-24}{25}$, find the values of the other four trigonometric functions.

5. **(4 points)** The following four graphs are of $f(x) = 1 + \csc x$, $g(x) = -\tan x$, $h(x) = \sec 2x$, and $r(x) = 3 \sin \frac{x}{2}$. Label which is which.

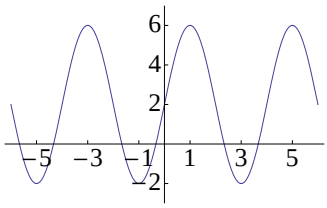








6. **(3 points)** Identify the amplitude and period of the curve which is graphed below.



7. **(3 points)** Identify the amplitude, period, and vertical shift of the curve described by the function $g(x) = -6\cos(3x) - 2$.