2. [16 points]
   
   a. [4 points] The domain and range of the function $y = f(x)$ are $[-2, 6]$ and $(-\infty, -10]$, respectively. What is the domain and range of $g(x) = 1 - f\left(\frac{1}{4}(x + 8)\right)$?

   Domain: ___________________________  Range: ___________________________

   b. [2 points] If $f(x) = |x^3|$, then the function $f(x)$ is (circle your answer)

   
   EVEN   ODD   NEITHER

   c. [2 points] Complete the following sentence:

   If $f(x) = 2^x$, then the graph of $g(x) = f(x + 3)$ can be obtained by applying a vertical stretch by a factor of ____________ to the graph of $y = f(x)$.

   d. [4 points] Find the equations of the vertical and horizontal asymptotes (if any) of the following functions. If a function does not have vertical or horizontal asymptotes write “None”.

   i)  $y = 3e^{-0.4x} - 2$

   Vertical asymptote: _______________  Horizontal asymptote: _______________

   ii) $y = 1 - 7\log(3x + 1)$

   Vertical asymptote: _______________  Horizontal asymptote: _______________

   e. [2 points] Find two exact values of $-\pi < \theta \leq \pi$, measured in radians, such that $\cos \theta = \cos(A)$, where $A = \frac{11}{6}\pi$ radians.

   $\theta =$ ___________________________

   f. [2 points] Let $f(x)$ be a periodic function that has amplitude 4 and let $g(x) = 3f(5x)$. Find the amplitude of the function $g(x)$.

   Amplitude of $g(x) =$ ______________________