

# HW 8

Please give complete, well written solutions to the following exercises.

**For the problems from the book (denoted by #), please make sure you solve the right problems by looking up the problem numbers on your EBook that comes with your web assign. The EBook is the latest (2nd) edition.**

1. Section 3.5: If  $g(x) = x \cos^{-1}\left(\frac{x}{4}\right) - \sqrt{16 - x^2}$ , find  $g'(2)$

2. Section 3.5: #34, #36

3. Section 3.7: #26, #30, #54

*(Hint for #54: rewrite first as a single fraction).*

4. Section 3.7: Find  $\lim_{x \rightarrow \infty} e^{-x} \sin x$ .

*(Hint: If L'Hospital's rule doesn't work, feel free to use any method you have learned so far in the course)*