Directions: Complete all of the following to the best of your ability. If you do not understand a question, please let me know; I may be able to assist you. Show all work, unless directed otherwise. You will usually be graded primarily on the method you use, not your final answer. GOOD LUCK!

All quizzes will be graded out of 10 possible points. The possible points for each question is in parentheses after the question number.

1. (4) Quick Calculations! Find the general antiderivative for each of the given functions. Write your answer in the space provided. Only your answer will be graded.

   (a) \( f(x) = \sin(x) + \sec(x) \tan(x) \)

   \[ \int f(x) \, dx = \] 

   (b) \( g(x) = 4\sqrt{x} + 2 \)

   \[ \int g(x) \, dx = \]

2. (6) Evaluate the indefinite integral

   \[ \int \frac{\cos \left( \frac{1}{x^2} \right)}{x^2} \, dx \]

   Show all work to receive full credit.