Homework 5

1. Problems finding volume of solids:
   - Section 6.3: 17, 19, 21, 29, 31
   - Section 6.4: 5, 7, 9, 17, 25

   Answer keys are in the back of the textbook.

2. Compute the following integrals using integration by parts several times:
   (a) \( \int e^{-x} \cos x \, dx \) with \( u = \cos x \) and \( dv = e^{-x} \, dx \).
   (b) \( \int x^2 e^x \, dx \) with \( u = x^2 \) and \( dv = e^x \, dx \).