1. Find a continuous function with continuous inverse from the open interval $(0, 1)$ to the real line $\mathbf{R}^1$. Give formulas for both the function and its inverse.

2. Complete the classification of regular polyhedra begun in class (and in section 1 of the text), as follows. For each possible value of

   - a = number of edges per face, and
   - b = number of edges per vertex,

   compute V, E, F to satisfy Euler's formula $V - E + F = 2$ and identify the corresponding polyhedron from Figure 1.9 or state that no such polyhedron exists.

	$a = 3$	$a = 4$	$a = 5$	$a = 6$
$b = 3$	$E = 6$ $V = F = 4$ tetrahedron			Impossible
$b = 4$				
$b = 5$				
$b = 6$				

3. Problem 10 on page 11. Can you see a geometric explanation of this duality?

4. Compute the Euler characteristics of the complexes in Figure 13 on page 4.