Problem 1

Do the first 8 problems in section 15.1 of your book. It should be matching images of curves to their parameterizations.

Problem 2

Integrate $f(x, y, z) = x + \sqrt{y} - z^2$ over the path from $(0, 0, 0)$ to $(1, 1, 1)$ given by the two curves

$$C_1 : \quad r(t) = t\mathbf{i} + t^2\mathbf{j}, \quad 0 \leq t \leq 1$$

$$C_2 : \quad r(t) = \mathbf{i} + \mathbf{j} + t\mathbf{k}, \quad 0 \leq t \leq 1.$$