Solution to Homework 7

**Question.** What is the squared distance $D^2(a, b)$ between the points $a = (1, 2, 3)$ and $b = (-1, -2, -3)$?

**Solution.**

$$D^2(a, b) = (1-(-1))^2 + (2-(-2))^2 + (3-(-3))^2 = 2^2 + 4^2 + 6^2 = 4 + 16 + 36 = 56.$$