Center of mass (negative mass)

Solve the following optimization problem

Find the center of mass of a given set of objects
(location and mass is known for each object)

$$\min x$$

$$X = \frac{\sum_i x_i m_i}{\sum_i m_i}$$

$$Y = \frac{\sum_i y_i m_i}{\sum_i m_i}$$

Ex18