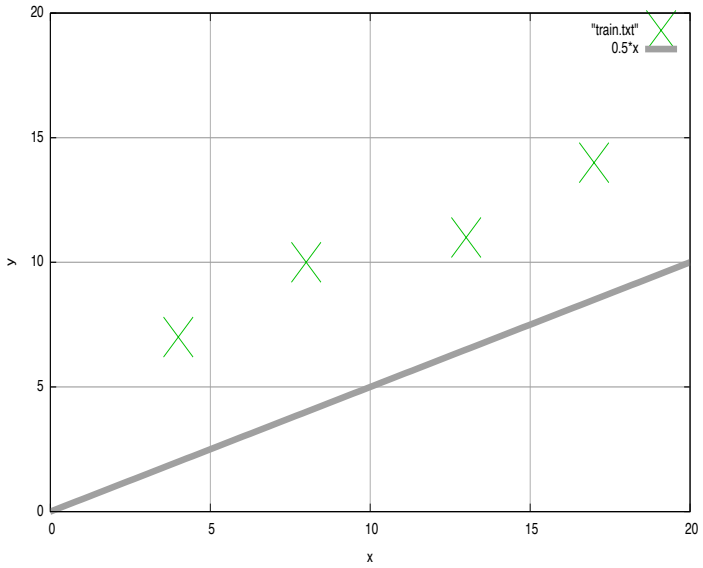
Hypothesis vs. Cost function (θ1=0.5)

θ0=0, θ1=0.5, (x,y)=(4,7), (8,10), (13,11)

Hypothesis:

$$h(x) = 0.5 * x$$



Cost function:

$$J(\theta_1) = \frac{1}{2m}\sum_{i=1}^{m}(h_\theta(x^{(i)}) - y^{(i)})^2$$

$$J(0.5) = \frac{1}{2m}((2-7)^2 + (4-10)^2 + (6.5-11)^2)$$

$$J(0.5) = \frac{1}{2*3}(25 + 36 + 20.25) = \frac{81.25}{6} = 13.54$$