Exercise-1.2: Very similar to previous exercise, just in this case our MSE function is regularized. Meaning we will end up with an additional term after derivation is complete. That additional term would be: $\frac{d}{dw_1}\frac{\lambda}{2}||w_i||^2 = \lambda w_i$ Then the final equation becomes:

$$\sum_{j=0}^{M} A_{ij}w_j = T_i - \lambda w_i$$

Where T_i and A_{ij} are given at the previous exercise.