Stochastic programming - problem 3

Assume the first stage decision $x \in R^1$, the second stage decision $\mathbf{y} \in R^6$, and let

$$W = \begin{pmatrix} 1 & -1 & -1 & -1 & 0 & 0 \\ 0 & 1 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 \end{pmatrix}.$$

Suppose there are two scenarios, with probability $1/2$ each. In the first scenario, $q^1 = (1, 0, 0, 0, 0, 0)^\top$, $h^1 = (-1, 2, 7)^\top$ and $T^1 = (1, 0, 0)^\top$. In the second scenario, $q^2 = (3/2, 0, 2/7, 1, 0, 0)^\top$, $h^2 = (0, 2, 7)^\top$ and $T^2 = (1, 0, 0)^\top$. Assume that x is bounded by $-20 \leq x \leq 20$ and $c = 0$. Starting from initial point $x^1 = -1$, iteratively add cuts for the L-shaped method for the first three iterations.