Problem 1

Consider the following weak learners: thresholds $h_{0+}$, $h_{0-}$, $h_{1+}$, $h_{1-}$, $h_{2+}$, $h_{2-}$, $h_{3+}$, $h_{3-}$, where $h_{i+}(x) = 1$, if $x > i$ and $-1$ otherwise, and $h_{i-}(x) = -1$ if $x > i$ and $0$ otherwise.

1. What is the best classifier out of the weak learners?

2. What is the error of $\text{sign}(h_{0+}(x) + h_{2+}(x) + h_{1-}(x))$?