AMAT 342 Homework 4. Due Tuesday Oct. 8, 2019

1. Which of the following is an equivalence relation on $\mathbb{Z}$?
    1. $x \sim y$ iff $x - y$ is divisible by 3. (Note: 0 is considered to be divisible by 3.)
    2. $x \sim y$ iff $\frac{x}{y} = 1$,
    3. $x \sim y$ iff $xy \geq 0$.
    4. $x \sim y$ iff $x = y$ or $x = -y$.

2. Compute the edit distance between the following pairs of sequences:
    1. $x = AAAA$, $y = AA$
    2. $x = AAAA$, $y = AAAT$
    3. $x = GTAA$, $y = TAAG$.
    4. $x = GGGG$, $y = TT$.