Name_____ Transitions; Quiz 4

Define the relation R on $\mathbb{Z}$ by aRb iff both of the following conditions are met:

1. $3|a-b$ (3 divides $a-b$)
2. $2|a-b$ (2 divides $a-b$)

When in fact aRb, we will write $a \sim b$.

1. Find five numbers that are all mutually equivalent.

2. Find five numbers that are all mutually non-equivalent.

3. Sketch a proof of the claim that R is an equivalence relation.

4. Partition $\mathbb{Z}$ into equivalence classes using this relation. (Your answer should be a partition of $\mathbb{Z}$)