

Name: _____

Pid: _____

1. On Friday Adam picked a number (it was the first day), every day with odd number he divides it by 2, and every even day he add 10 to it. Write a recurrent formula for the number Adam has on n th day.

2. Let $X = \mathbb{Z} \times \mathbb{Z}$ and R be a relation on X such that

$$(x_1, y_1)R(x_2, y_2) \iff x_1 - y_2 \text{ and } x_2 - y_1 \text{ are odd.}$$

Is R an equivalence relation on X ?

3. Let $X = \mathbb{Z} \times \mathbb{Z}$ and R be a relation on X such that

$$(x_1, y_1)R(x_2, y_2) \iff x_1 + y_1 \leq x_2 + y_2.$$

Is R a partial order on X ?