Directions: Answer the problems given below.

1. Let $A = \{1, 2, 3, 4, 5, 6\}$, and let R be the relation on A defined as follows:

$$\text{For every } x, y \in A, \ xRy \Leftrightarrow 4|(x^2 - y^2).$$

a. Write out the relation R as a set of ordered pairs.

b. Draw the directed graph of R.