Assignment 6: Geometric Image Transformations

Q1. **Translation**: There is one attached image "moon.jpg", identify moon and translate it in x and y directions, where $t_x = 200$ and $t_y = 175$. Add the offset values so that a part of moon does not go outside current image boundary.

Q2. **Rotation:** Take any image of your choice and rotate it around its center by an angle of 120 degrees:

a. In steps of 15 degrees increment
b. Directly by 120 degrees

The transformation for rotation by angle *t* around point (xc, yc) is

x' = (x – xc) cos t – (y – yc) sin t + xc

y' = (x – xc) sint t + (y – yc) cos t + yc

Write you observation clearly.