Joystick Calibration

1. x = (a - 10) / (-512)
   y = (b - 8) / (-512)
   The -10 and -8 in the equations account for the joystick not being perfectly centered
2. Center: (10,8)

   It is not perfectly centered because of the manufacturing. The precision of the joystick potentiometers could not be perfectly matched by the manufacturing process.

3. The effect could be that whatever application would not be accurate. For example, if the joystick was programmed to control a robot, the robot would drift to one side.
4. The joystick's initial value could be read at the beginning of the program and use the measured values.