

Name: ANSWER KEY Score: \_\_\_\_\_

Describe in full the graph of the equation:

$$x^2 + y^2 + 4y - 117 = 0$$

$$x^2 + (y^2 + 4y) = 117$$

$$x^2 + (y^2 + 4y + 4) = 117 + 4$$

$$x^2 + (y + 2)^2 = 121 = 11^2$$

Circle whose center is  $(0, -2)$ , radius = 11