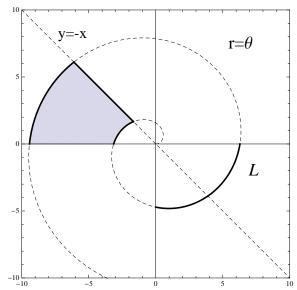
2. [11 points] Consider the graph of the spiral $r = \theta$ for $\theta \ge 0$.



In the following questions, write an expression (you do not need to evaluate any integrals) involving definite integrals that computes the values of the following quantities :

a. [4 points] The length of the arc L.

b. [7 points] The area of the shaded region.