

MATH 134 – Calculus with Fundamentals 2

Quiz 3 – February 23, 2018

Your Name: \_\_\_\_\_

*Directions*

There are 30 total points possible (distributed as indicated in the questions on both sides). You may use a calculator, but not a phone or any other electronic device.

(A) (10) Refer to Figure 1 on the back showing the region bounded by  $y = x^3$  and  $y = 9x$  for  $x$  in  $[0, 3]$ . Set up and compute the integral giving the *area* bounded by these curves.

(B) (10) Set up and compute the integral giving the *volume* of the solid generated by the region bounded by  $y = x + 3$ ,  $x = 1$ ,  $x = 3$  and the  $x$ -axis, *rotated about the  $x$ -axis*.

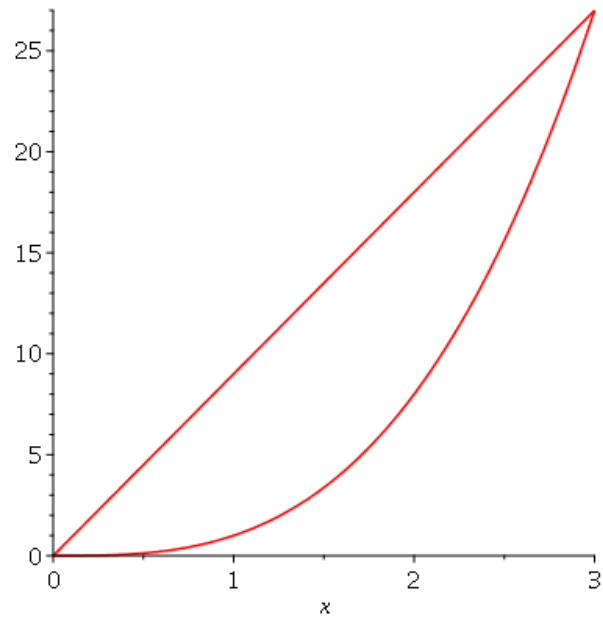


Figure 1: The region for Problems A and C.

- (C) (10) Refer again to the region shown in Figure 1. Set up the integral for the *volume* of the solid generated by rotating that region about the line  $y = -1$ . *You are not to compute the integral, just set it up.*