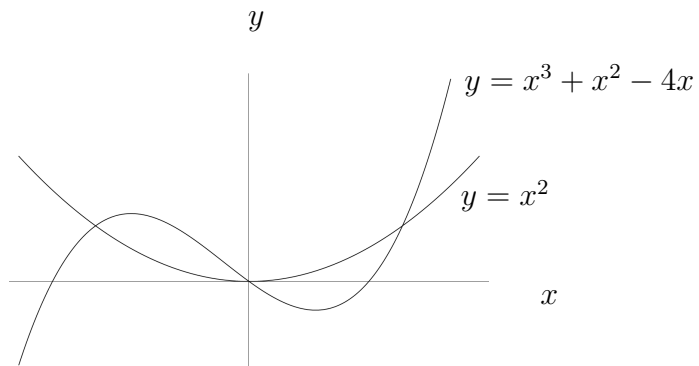


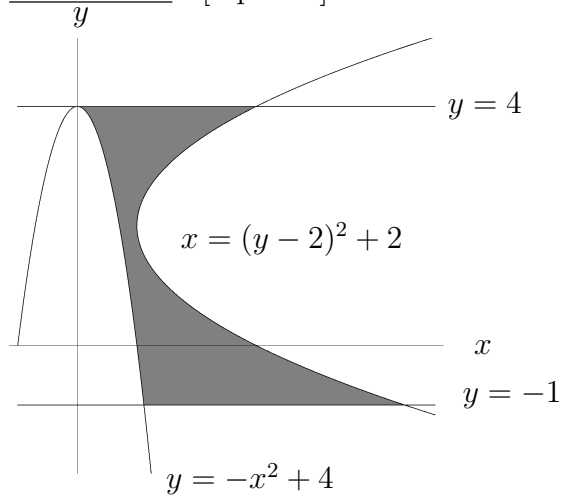
SHOW ALL WORK!!! Unsupported answers might not receive full credit.

Problem 1 [6 points] Find the area of the entire region that is bounded by the graphs of $y = x^2$ and $y = x^3 + x^2 - 4x$. Give the exact answer (you do not need to simplify the numerical value.)



SHOW ALL WORK!!! Unsupported answers might not receive full credit.

Problem 1 [4 points] Consider the shaded region R in the image below.



a) Set up an integral that represents the area of the region R using the y -axis.

b) Set up a sum of integrals that represents the area of the region R using the x -axis.

c) Compute and compare the values for the area of region R from parts a and b.