



Handout

MATH 172 Lab: Sections 7 and 8

Lab Instructor (TA): Mohammed Kaabar

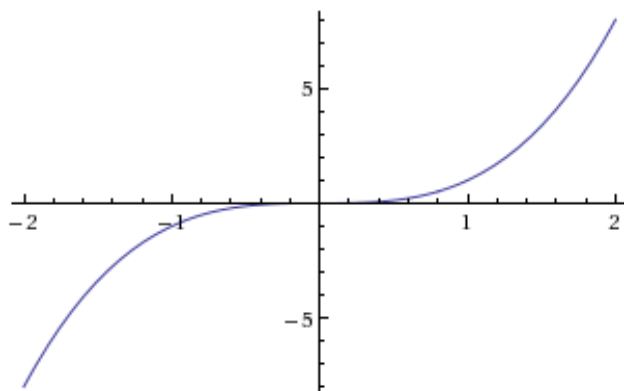
Student's Name:-----

Student's ID:-----

Note: This handout covers some problems about the area between curves

Instruction: Work in groups to solve the following mathematical problems, and I want from each group one person to volunteer as a representative to present the solution of (one problem)/(one part of problem) on our class board. DON'T AFRAID TO MAKE MISTAKES BECAUSE WE LEARN FROM OUR MISTAKES!

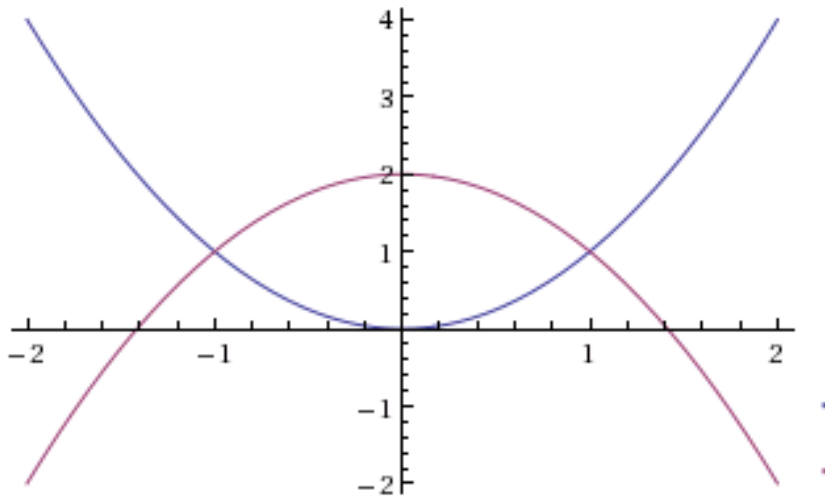
Problem 1: The figure below shows the graph of $y = x^3$ and $x - axis$ on the interval $[-2,2]$.



Find the area between y and $x - axis$ on $[-2,2]$.

Hint: You can write the area as either one integral or a sum of two integrals (both answers are correct).

Problem 2: The figure below shows a region bounded by the functions $y = x^2$ and $y = 2 - x^2$.



- Find the (highlighted area by lines) between curves.
- Find the (highlighted area by stars) between curves.
- Find the area between two curves using intersection points.