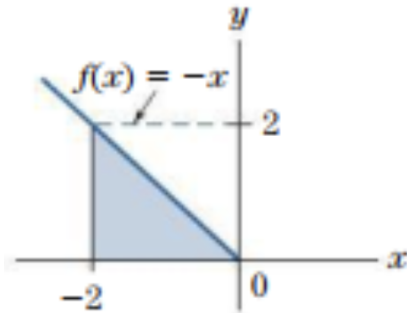


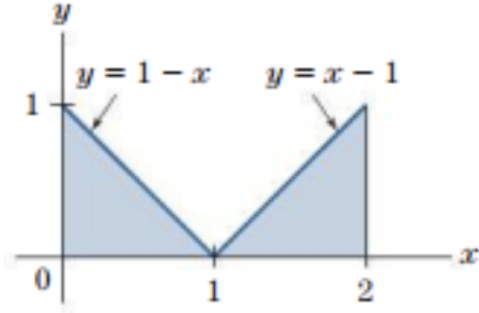
Show all work and circle/box your final answer. All answers must be simplified unless stated otherwise.

1. Use integrals to find the areas of the shaded regions:

(a)



(b)



2. Find the total area between the x -axis and $f(x) = 9 - x^2$ on the interval $[0, 6]$

3. Set up but do not evaluate the integral needed to find the area between the x -axis and the following functions:

(a) $f(x) = x^3 - 2x$ on $[-2, 4]$

(b) $f(x) = 1 - e^{-x}$ on $[-1, 2]$