Math 232 Worksheet 1

1. Find the area of the region enclosed by the given curves.

(a) $y = x^2,\ y = x + 2$

(b) $x = 2y^2,\ x = y^2 + 1$

2. The region enclosed by the given curves is rotated about the specified axis. Find the volume of the resulting solid using cross-sections.

(a) $y = \sqrt{x},\ y = x;$ about the x-axis

(b) $y = x^2,\ y = 0,\ x = 1;$ about $x = 1$

Answer keys

1.(a) 9/2

1.(b) 4/3

2.(a) pi/6

2.(b) pi/6