Find the area of each region. Use a piece of graph paper to graph each region.

1. The region in the first quadrant above the line $y = 3x - 2$ and below the line $y = 4$.

2. The region between the curve $y = x^3$ and the lines $y = -x$ and $y = 1$.

3. The region between the parabola $y = 4x^2$ and the line $y = 2x - 3$ from $x = 0$ to $x = 1$.

4. The region between the curves $y = \sqrt{x}$ and $y = 1$ and $x = 4$.

5. The region between the curves $y = \sin x$ and $y = \cos x$ from $x = 0$ to $x = (\pi/4)$.

6. The region between the parabola $x = -y^2$ and the line $y = x + 6$.
   (Hint: You must integrate with respect to y)

7. The region between the parabola $y = x^2 - x - 6$ and the line $y = -4$.

8. The region between the curves $y = \sqrt{x}$ and $y = x^3$.

9. The region bounded by the parabolas $y = x^2$ and $y = -x^2 + 6x$.

10. The region under the curve $y = \sqrt{x}$ and above the x-axis on the interval $[0, 4]$.