Sketch each region and find its area

1. The region between $y = -x^2$ and $y = e^x$ for $0 \leq x \leq 3$

2. The region bounded by $y = x^2 + 1$ and $y = 5$

3. The region bounded by $y = 3x + 2$ and $y = x^3$

4. The region bounded by $y = x^3 - x$ and $y = 3x$

5. The region bounded by $y = 4x + 4$, $y = -x + 4$ and the *x*-axis

6. The region bounded by $x = y^2 + 1$ and $x = 5$