

HW Sec 10.2 (KEY)

1. Γ has a tangent line that is perpendicular to the line $x + y + 3 = 0$ at $\left(-\frac{43}{9}, \frac{10}{27}\right)$ and $(-3, 2)$.
2. Γ has horizontal tangent lines at $\left(\frac{1}{2}, -1\right)$ and $\left(-\frac{1}{2}, 1\right)$. Γ doesn't have any vertical tangent lines.
3. $\ln(2 + \sqrt{3})$ unit
4. $3 - e$ unit²
5.
 - a. Γ has a horizontal tangent line at $(2, 0)$, and a vertical tangent line at $(0, 2)$.
 - b. 3 unit
 - c. $\frac{24}{5}\pi$ unit²
6. $\frac{48}{5}\pi$ unit²
7. $(e^2 + 2e - 6)\pi$ unit²