

5. (10 points)

(a) If the graph of

$$\frac{a}{y} + x^2 + b \ln y = 6$$

goes through the point $(2, 1)$ for some implicitly defined y , find a .

(b) Suppose $g(x) = -4x + 9$ is the equation of the tangent to the curve defined above at the point $(2, 1)$. Find b .