

- Let $f(x) = x^3 - 5x^2 - 8$ and let g be the inverse function of f .
 - Find $f(1)$ and $f'(1)$.
 - Find $g(-12)$ and $g'(-12)$.
- Let f be the function defined by $f(x) = x^3 + 7x + 2$. If $g(x) = f^{-1}(x)$ and $f(1) = 10$, what is the value of $g'(10)$?
- Let f be the function defined by $f(x) = x^5 + 3x^3 + 7x + 2$. If $g(x) = f^{-1}(x)$ and $f(1) = 13$, what is the value of $g'(13)$?
- Let f be the function defined by $f(x) = 7x^3 + (\ln x)^3$. If $g(x) = f^{-1}(x)$ and $f(1) = 7$, what is the value of $g'(7)$?
- Let f be the function defined by $f(x) = x^7 + 2x + 9$. The point $(1, 12)$ is on the graph of f . If $g(x) = f^{-1}(x)$, find $g'(12)$.
- Find the equation of the tangent line to the inverse of $f(x) = x^5 + 2x^3 + x - 4$ at the point $(-4, 0)$.
- Find the equation of the tangent line to the inverse of $f(x) = 7x + \sin(2x)$ at the point $(0, 0)$.
- Find the equation of the tangent line to the inverse of $f(x) = x^3 + 8x + \cos(3x)$ at the point $(1, 0)$.
- The functions f and g are differentiable. Given that $g(x) = f^{-1}(x)$, $f(1) = 3$, and $f'(1) = -5$, find $g'(3)$.
- The functions f and g are differentiable. Given that $g(x) = f^{-1}(x)$, $f(2) = 4$, $f(4) = -6$, $f'(2) = 7$, and $f'(4) = 11$, find $g'(4)$.