

$$16. \quad y = \arctan \frac{x}{2} \quad u = \frac{1}{2}x$$

$$y' = \frac{1}{1 + \frac{x^2}{4}} \cdot \frac{1}{2}$$

$$y' = \frac{1}{2 + \frac{x^2}{2}}$$

$$y' = \frac{2}{4 + x^2}$$

$$\textcircled{1} \quad 17. \quad y = x^2 + 4$$

$$29 = x^2 + 4$$

$$25 = x^2$$

$$5 = x$$

$$y' = 2x$$

$$y' = 10$$

original function      inverse  
(5, 29)      (29, 5)

$$(f^{-1}(x))'(x) = \boxed{\frac{1}{10}}$$

$$\textcircled{2} \quad 18. \quad y = 2x^3 + 5x + 1$$

$$8 = 2x^3 + 5x + 1$$

$$1 = x$$

$$y' = 6x^2 + 5$$

$$y' = 6(1)^2 + 5$$

$$y' = 11$$

original      inverse  
(1, 8)      (8, 1)

$$(f^{-1}(x))'(x) = \boxed{\frac{1}{11}}$$