

2-4 Composition of Functions and Inverses

Name _____

Let $f(x) = 2x + 3$

$g(x) = x - 10$

$h(x) = 3x - 1$

$k(x) = x^2$

_____ 1. Find $f(g(x))$

_____ 2. Find $g(f(x))$

_____ 3. Find $f(h(x))$

_____ 4. Find $f(f(x))$

_____ 5. Find $f(k(x))$

_____ 6. Find $g(h(x))$

_____ 7. Find $h(g(x))$

_____ 8. Find $k(k(x))$

_____ 9. Find $k(g(x))$

_____ 10. Find $g(h(f(x)))$

_____ 11. Find $f(h(g(x)))$

_____ 12. If $f(x) = 3x + 1$, find the inverse of $f(x)$. [Inverse is $f^{-1}(x)$]

_____ 13. If $f(x) = \frac{x+8}{2}$, find the inverse of $f(x)$. [Inverse is $f^{-1}(x)$]

_____ 14. If $f(x) = 5x - 2$, find the inverse of $f(x)$. [Inverse is $f^{-1}(x)$]

_____ 15. If $f(x) = \frac{2x}{3} + 5$, find the inverse of $f(x)$. [Inverse is $f^{-1}(x)$]