Homework: Introduction to Functions - Key

In Problems 1-3, determine whether each relation represents a function. State the domain and the range of each relation.

1. Function Domain: {3, 4, 5, 6} Range: {-1, 1, 2}	2. Not a Function Domain: {1, 2, 7} Range: {2, 3, 4, 5}
3. Function Domain: {-3, -1, 3, 4} Range: {1, 2}	

In Problems 4-8, determine whether each equation shows y as a function of x.

4. Function	5. Function
6. Not a Function	7. Not a Function
8. Function	

In Problems 9-12, determine whether the graph is that of a function.

9. Function	10. Function
11. Not a Function	12. Not a Function

In Problems 13-16, find the indicated value of each function.

$(a) f(2) \quad (b) f(-1) \quad (c) f(5)$

13. $(a) 11$ $(b) -4$ $(c) 26$	14. $(a) -5$ $(b) 1$ $(c) -11$

15.	16.
$(a) 4$ $(b) 4$ $(c) 22$	$(a) -4$ $(b) -7$ $(c) -37$

In Problems 17-18, find the indicated value of each function.

$(a) f(-x) \quad (b) f(x-3) \quad (c) f(4x)$
$(d) -f(x) \quad (e) f(x+h)$

17.	18.
$(a) -4x-2$ $(b) 4x-14$ $(c) 16x-2$ $(d) -4x+2$ $(e) 4x+4h-2$	$(a) x-2$ $(b) -x+1$ $(c) -4x-2$ $(d) x+2$ $(e) -x-h-2$

In Problems 19-22, find the value of each function.

19. 7	20. -3
21. 1	22. $\frac{9}{7}$