1-7 Practice
Functions

Determine whether each relation is a function.

1.

2.

X	Y
1	5
–4	–3
7	6
1	–2

3.
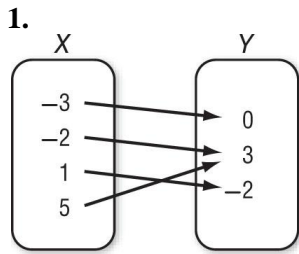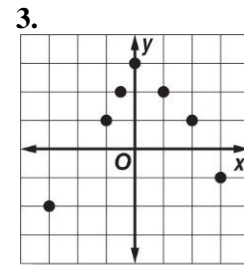
4. {(1, 4), (2, –2), (3, –6), (–6, 3), (–3, 6)}

5. {(6, –4), (2, –4), (–4, 2), (4, 6), (2, 6)}

6. $x = -2$

7. $y = 2$

If $f(x) = 2x - 6$ and $g(x) = x - 2x^2$, find each value.

8. $f(2)$

9. $f\left(-\dfrac{1}{2}\right)$

10. $g(-1)$

11. $g\left(-\dfrac{1}{3}\right)$

12. $f(7) - 9$

13. $g(-3) + 13$

14. $f(h + 9)$

15. $g(3y)$

16. $2[g(b) + 1]$

17. WAGES Martin earns $7.50 per hour proofreading ads at a local newspaper. His weekly wage w can be described by the equation $w = 7.5h$, where h is the number of hours worked.

   a. Write the equation in function notation.

   b. Find $f(15)$, $f(20)$, and $f(25)$.

18. ELECTRICITY The table shows the relationship between resistance R and current I in a circuit.

Resistance (ohms)	120	80	48	6	4
Current (amperes)	0.1	0.15	0.25	2	3

   a. Is the relationship a function? Explain.

   b. If the relation can be represented by the equation $IR = 12$, rewrite the equation in function notation so that the resistance R is a function of the current I.

   c. What is the resistance in a circuit when the current is 0.5 ampere?