In each problem below a relation is given using the listing method. In each case you are to
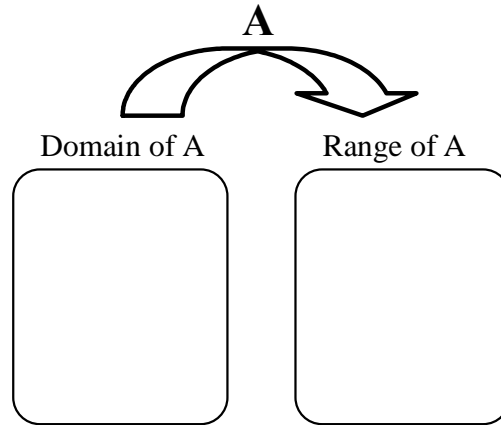(a) **graph the relation,**
(b) **complete the mapping diagram for the relation, and**
(c) **determine whether or not the relation is a function (write yes or no).**

1.   A = { (-5 , 5) , (-3 , 3) , (-1 , 1) , (1 , 1) , (3 , 3) , (5 , 5) }

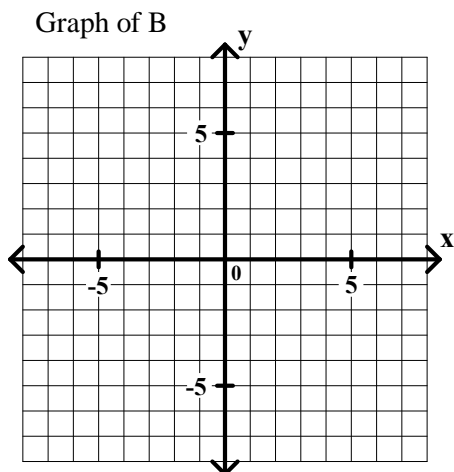**(a)**   **(b)**

Graph of A

A

Domain of A   Range of A
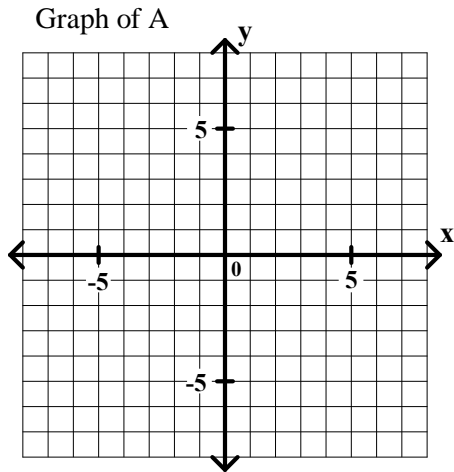
(c) Is relation A a function? _____

2.   B = { (-6 , 4) , (-6 , -4) , (-3 , 2) , (-3, -2) , (0 , 0) }

(a)   **(b)**

Graph of B

B

Domain of B   Range of B
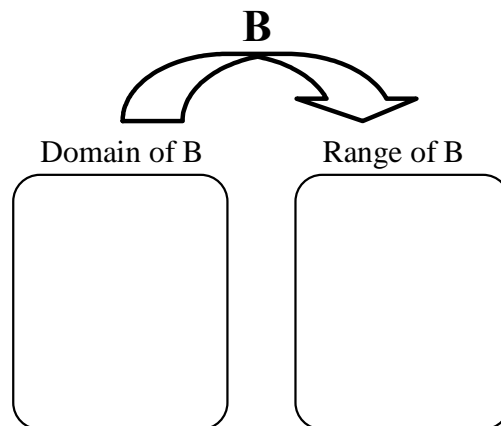
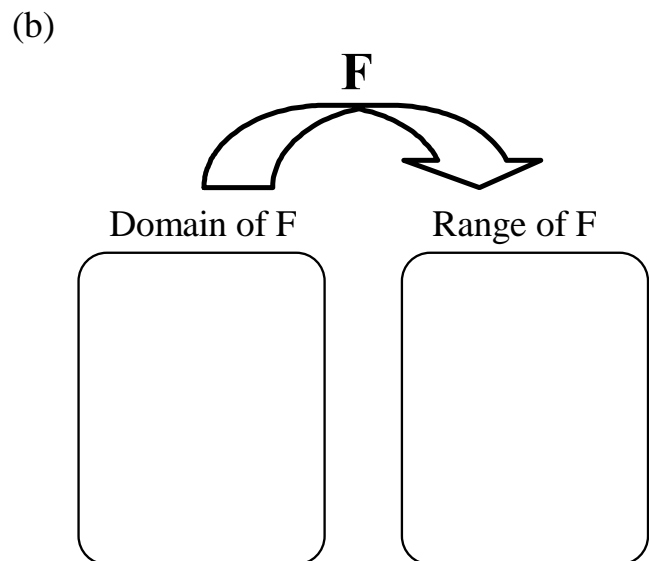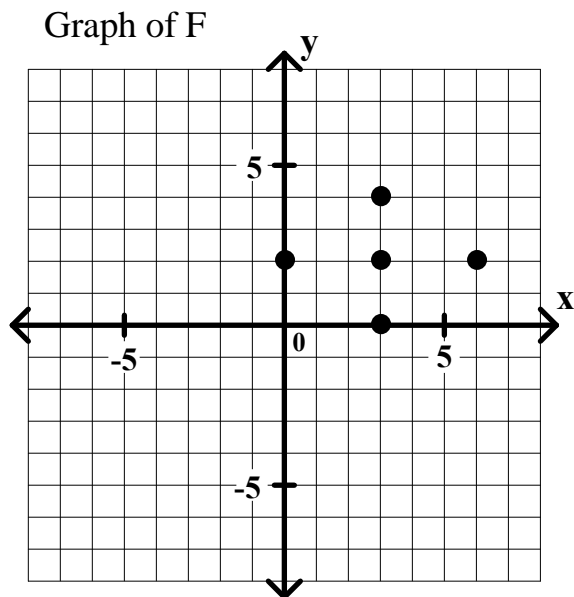**(c) Is relation B a function? _____**

In each problem below a relation is given using a graph. In each case you are to
      (a) describe the relation using the listing method and
      (b) complete the mapping diagram for the relation.
      (c) determine whether or not the relation is a function (write yes or no).

3. (a) C = _____

Graph of C

(b)

C

Domain of C   Range of C
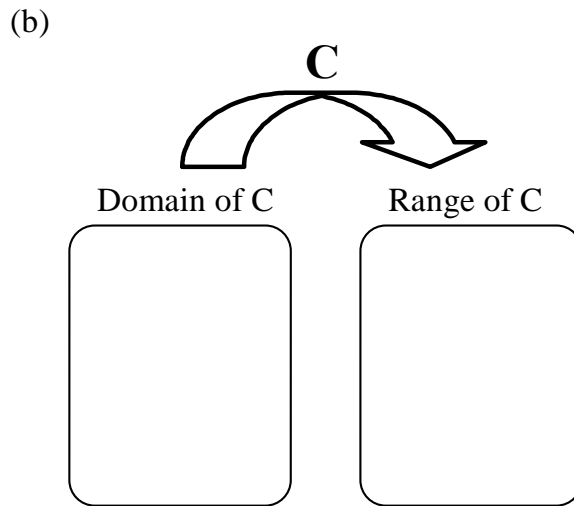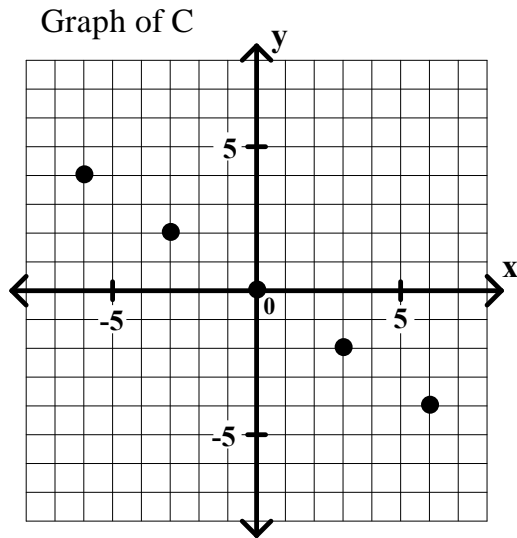
(c) Is relation C a function? _____

4. (a) F = _____

Graph of F

(b)

F

Domain of F   Range of F

(c) Is relation F a function? _____

In each problem below a relation is given using a mapping diagram. In each case you are to
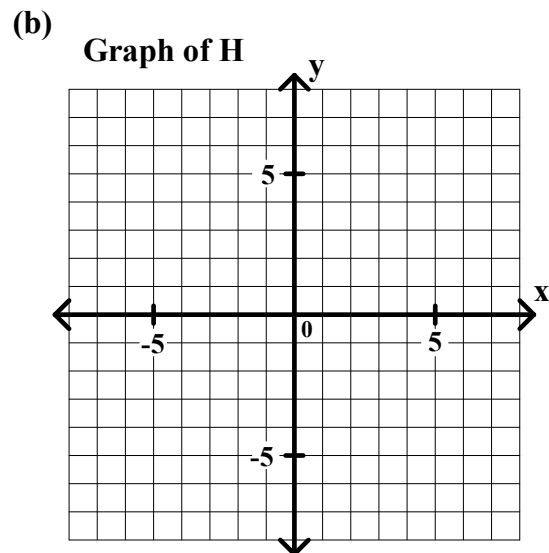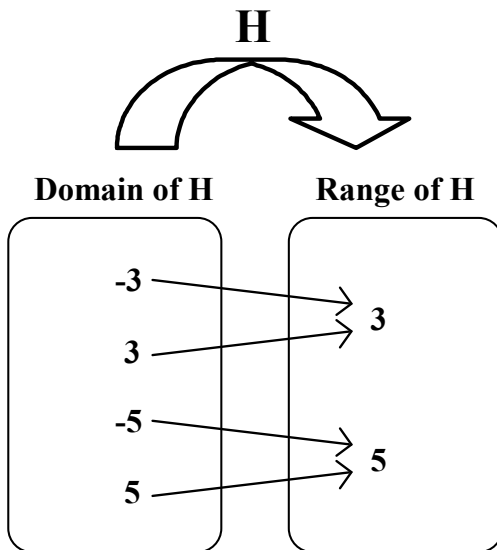   **(a) describe the relation using the listing method and**
        (b) graph the relation.
        (c) determine whether or not the relation is a function (write yes or no).

5. (a) G = _____

G

(b)

Graph of G

Domain of G   **Range of G**

-3 → 2
-3 → -2

3 → 5
3 → -5
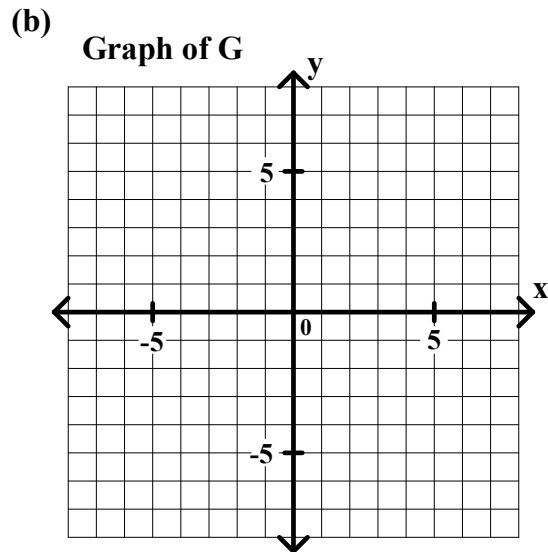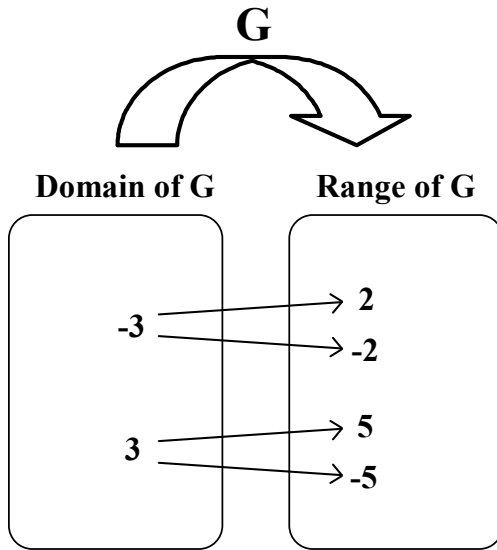
(c) Is relation G a function? _____

6. (a) H = _____

H

(b)

Graph of H

Domain of H   **Range of H**

-3 → 3
3 → 3

-5 → 5
5 → 5

(c) Is relation H a function? _____

General Algebra II   Worksheet #3   Unit 6   page 4

Given: Functions f = { (x,y) : y = -3x + 5 } and g = { (x,y) : y = 3x² – 2 }. Evaluate each of the following.

7. f(-2) = _____

8. f(0) = _____

9. f(3) = _____

10. g(-2) = _____

11. g(0) = _____

12. g(3) = _____

Given: Functions H and L defined by the equation H(x) = 5x + 7 and L(x) = -2x³ – 1. Evaluate each of the following.

13. H(-2) = _____

14. H(0) = _____

15. H(3) = _____

16. L(-2) = _____

17. L(0) = _____

18. L(3) = _____

Given the function P defined by this graph.

Graph of P

19. What is the domain of P? _____

20. What is the range of P? _____

Evaluate each of the following.

21. P(-2) = _____

22. P(0) = _____

23. P(3) = _____
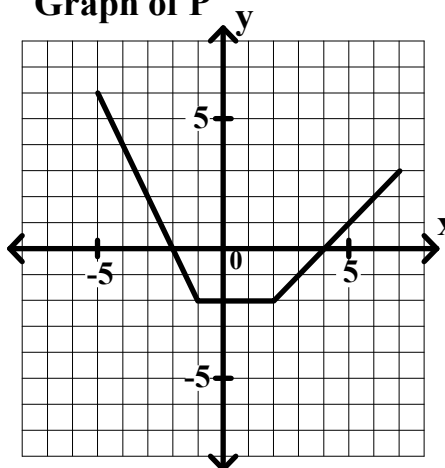
Given the function k defined by this graph.

Graph of k

24. What is the domain of k? _____

25. What is the range of k? _____

Evaluate each of the following.

26. k(-2) = _____

27. k(0) = _____

28. k(3) = _____