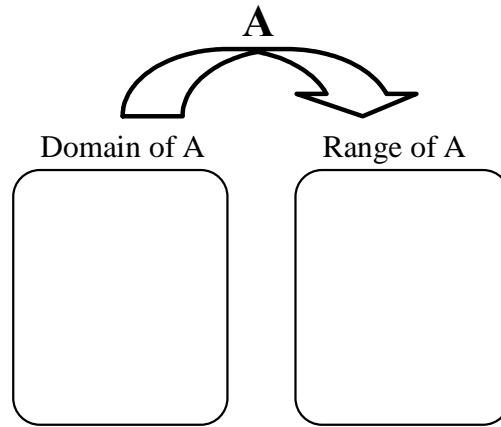
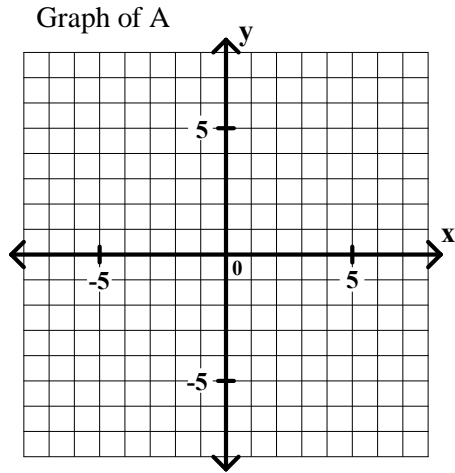


Algebra I Review Unit 8 page 1

Given relation $A = \{ (-3, 4), (-1, 4), (0, 5), (2, -1) \}$

- Graph relation A.
- Complete the mapping diagram for relation A.



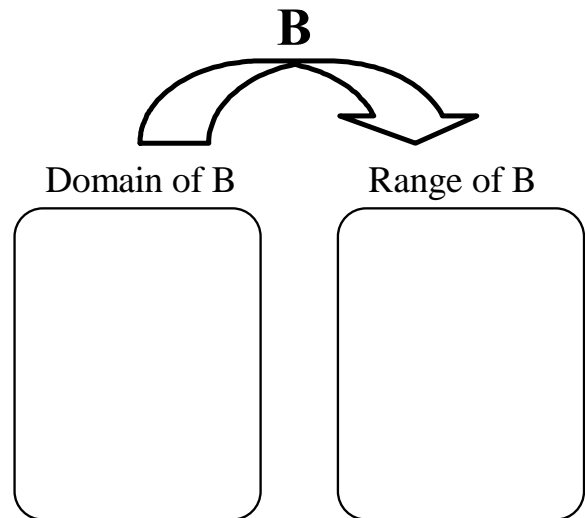
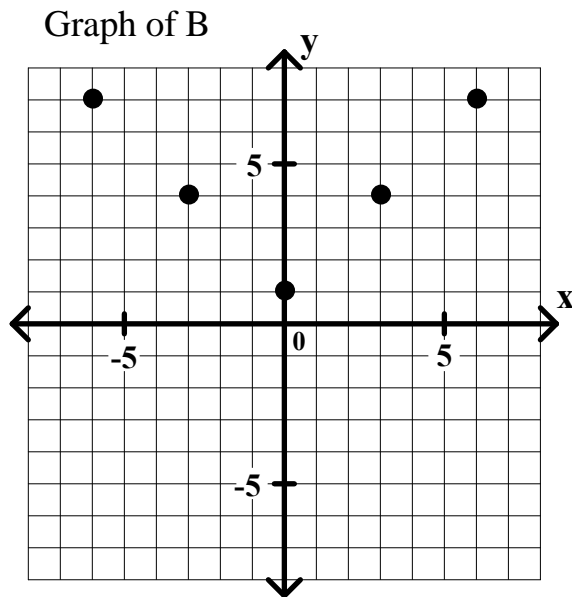
3. Is relation A a function? _____

Given relation B graphed below.

- Describe the relation using the listing method.

$B =$ _____

- Complete the mapping diagram for relation B.



6. Is relation B a function? _____

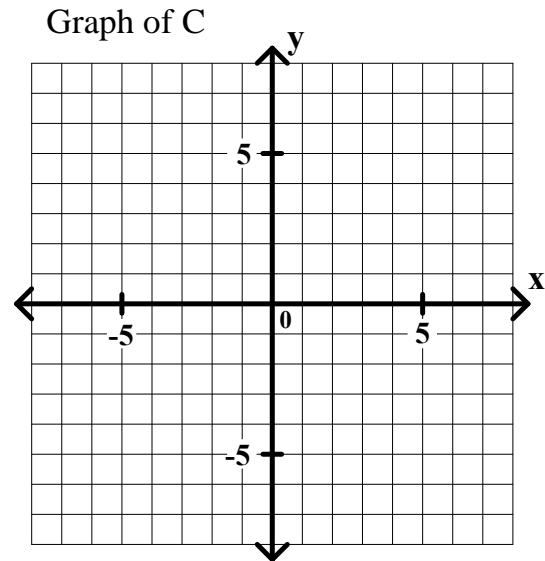
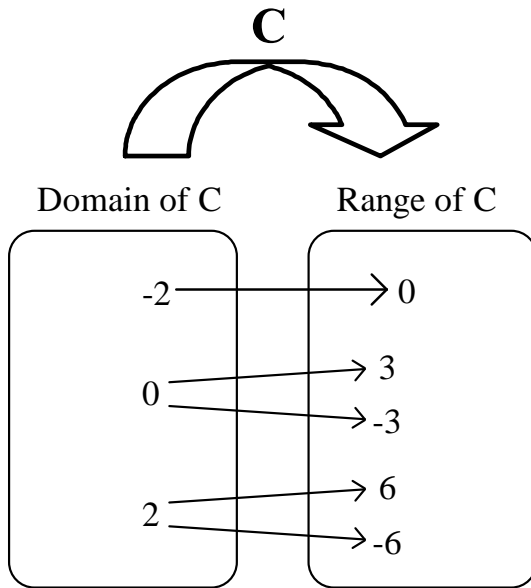
Algebra I Review Unit 8 page 2

Given relation C defined using a mapping diagram below.

7. Describe the relation using the listing method

C = _____

8. Graph relation C.



9. Is relation C a function? _____

Given: Function $G = \{ (x,y) : y = 2x + 3 \}$. Evaluate each of the following.

10. $G(3) =$ _____

11. $G(0) =$ _____

12. $G(-4) =$ _____

Given the function H defined by this graph.

13. Write an inequality to describe the domain of H? _____

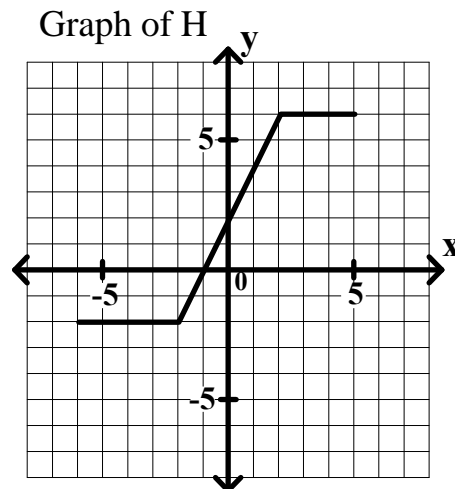
14. Write an inequality to describe the range of H? _____

Evaluate each of the following.

15. $H(-4) =$ _____

16. $H(0) =$ _____

17. $H(3) =$ _____

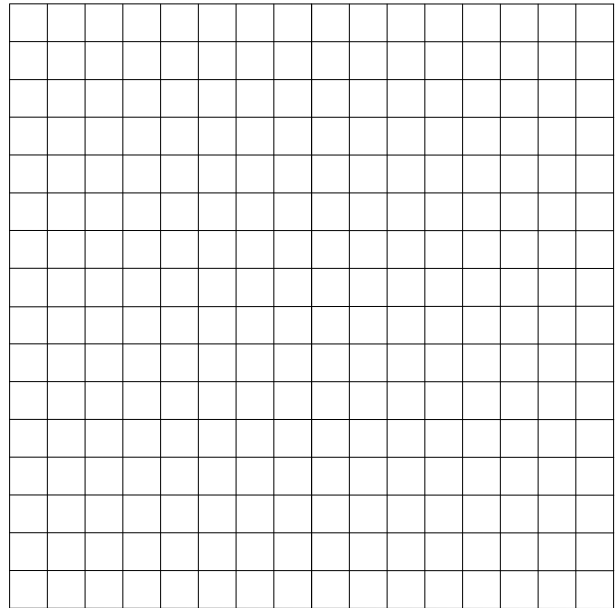


Algebra I Review Unit 8 page 3

Bill walks for **30 seconds** at a constant speed of **5 feet per second**. Let t represent his walking time (in **seconds**) and $d(t)$ represent the distance he has walked (in **feet**). Answer each of the following.

18. Make a table giving t and $d(t)$ every 5 seconds from $t = 0$ to the end of the walk.

19. Graph function d .



20. Write an equation giving $d(t)$ in terms of t .

21. Write an inequality to describe the domain of function d . _____

22. Write an inequality to describe the range of function d . _____

23. Evaluate $d(8)$. What does $d(8)$ represent in terms of the problem?

24. If $d(t) = 80$, then find the value of t . Describe what this value of t represents in terms of the problem.

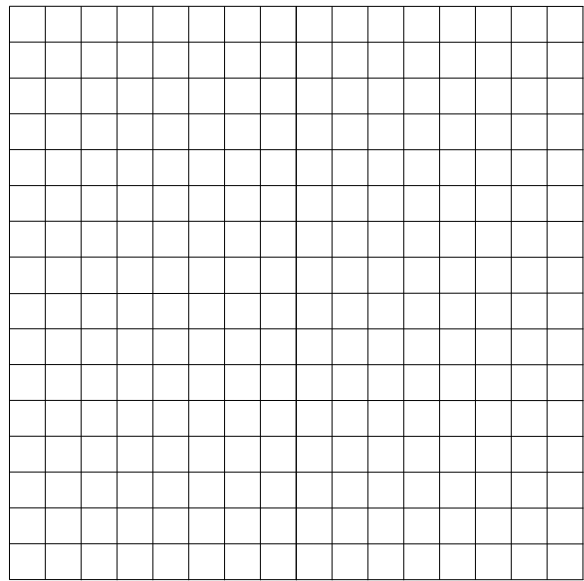
Algebra I Review Unit 8 page 4

A rectangular water tank is 8 feet long, 6 feet wide, and 5 feet deep. The tank is half-full initially and water is pumped into the tank at 10 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let $f(t)$ represent the **depth of the water** in the tank (in **inches**). Answer each of the following. Show your process neatly organized.

25. How long will it take to fill the tank? _____

26. Make a table giving t and $f(t)$ every 4 minutes from $t = 0$ until the tank is full.

27. Graph function f .



28. Write an equation giving $f(t)$ in terms of t . _____

29. Write an inequality to describe the domain of function f . _____

30. Write an inequality to describe the range of function f . _____

31. Evaluate $f(6)$. What does $f(6)$ represent in terms of the problem?

32. If $f(t) = 55$, then find the value of t . Describe what this value of t represents in terms of the problem.