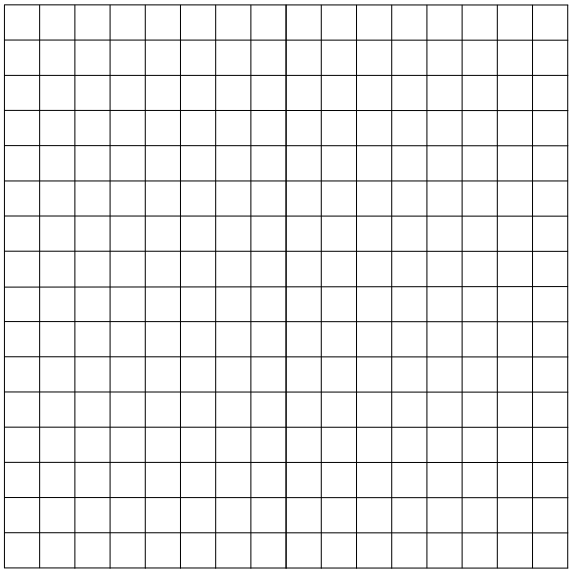
Algebra I Worksheet #11 Unit 8 page 1 _____

Patty bikes for **2.5 hours** at a constant speed of **12 miles per hour**. Let t represent her biking time (in **hours**) and d(t) represent the distance she has biked (in **miles**). Answer each of the following. Show your process neatly organized.

1. Make a table giving t and d(t) every half hour from t = 0 to t = 2.5.

2. Graph function d.



3. Write an equation giving d(t) in terms of t. _____

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

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

6. Evaluate d(1.25). What does d(1.25) represent in terms of the problem?

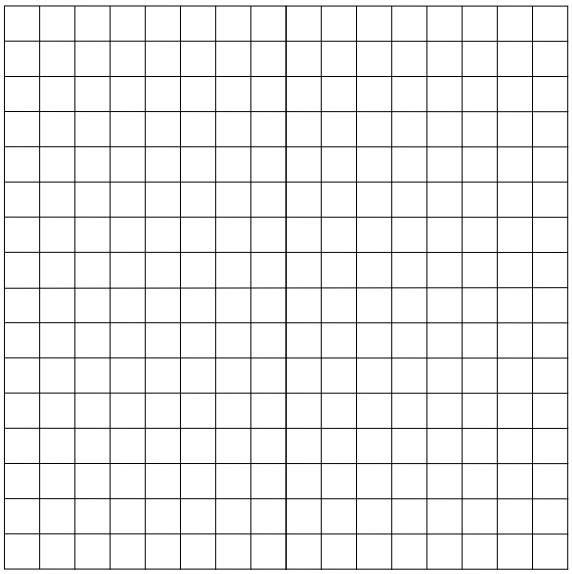
7. If d(t) = 21, then find the value of t. Describe what this value of t represents in terms of the problem.

Algebra I Worksheet #11 Unit 8 page 2

Phil has a part-time job. He can work up to 20 hours a week. He gets paid $6 per hour. Let t represent the number of hours he works. Let P(t) represent his total pay.

8. Make a table giving t and P(t) every 4 hours from t = 0 to t = 20.

9. Graph function P.



10. Write an equation giving P(t) in terms of t. _____

11. Write an inequality to describe the domain of function P. _____

12. Write an inequality to describe the range of function P. _____

13. Evaluate P(8). What does P(8) represent in terms of the problem?

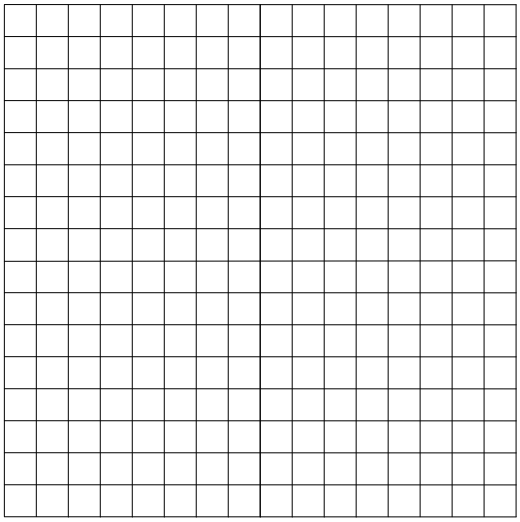
14. If P(t) = 42, then find the value of t. Describe what this value of t represents in terms of the problem.

Algebra I Worksheet #11 Unit 8 page 3

A rectangular water tank is 10 feet long, 6 feet wide, and 4 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.

15. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

16. Graph function f.



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

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

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

20. Evaluate f(4). What does f(4) represent in terms of the problem?

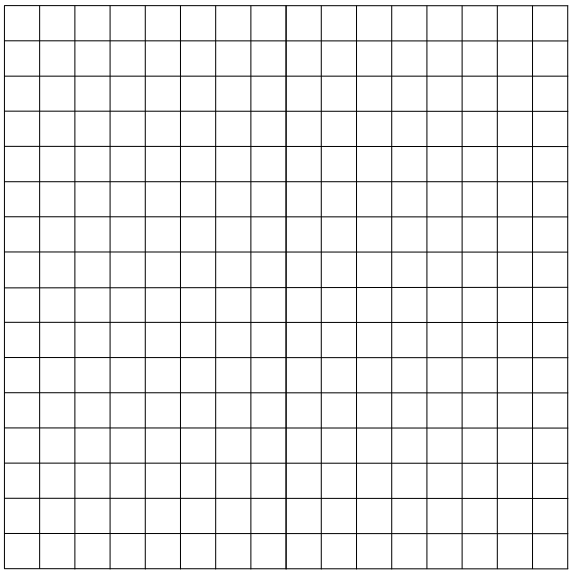
21. If f(t) = 40, then find the value of t. Describe what this value of t represents in terms of the problem.

Algebra I Worksheet #11 Unit 8 page 3

Paul lives 100 miles from his cousin Bill. Paul drives from his house to Billôs house at a constant speed of 40 miles per hour. Let t represent Paulôs driving time in hours. Let D(t) represent the **distance that Paul is from Bill's house in miles**. Answer each of the following. Show your process neatly organized.

22. Make a table giving t and D(t) every **half hour** from t = 0 until Paul reaches Billôs house.

23. Graph function D.



24. Write an equation giving D(t) in terms of t. _____

25. Write an inequality to describe the domain of function D. _____

26. Write an inequality to describe the range of function D. _____

27. Evaluate D(1.25). What does D(1.25) represent in terms of the problem?

28. If D(t) = 20, then find the value of t. Describe what this value of t represents in terms of the problem.