

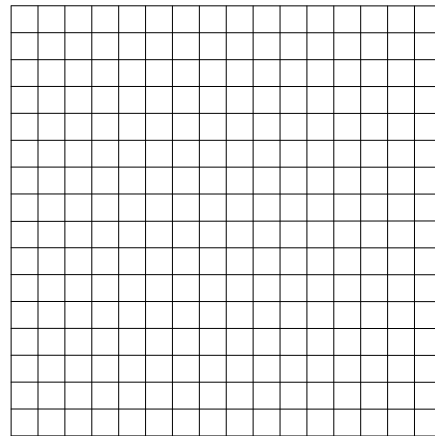
General Algebra II Worksheet #6 Unit 6 page 1 _____

A rectangular water tank is 10 feet long, 3 feet wide, and 5 feet deep. The tank is empty initially and water is pumped into the tank at 7.5 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.

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

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

3. Graph function f .



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

5. What is the domain of function f ?

6. What is the range of function f ?

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

8. If $f(t) = 45$, then find the value of t . Describe what this value of t represents in terms of the problem.

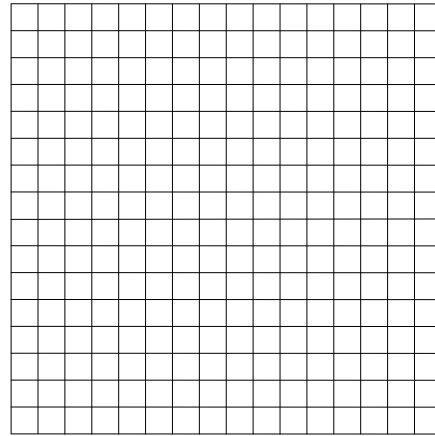
General Algebra II Worksheet #6 Unit 6 page 2

A rectangular water tank is 8 feet long, 6 feet wide, and 5 feet deep. The tank is full initially and water is drained out of the tank at 12 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of 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.

9. How long will it take to empty the tank? _____

10. Make a table giving t and $F(t)$ every 4 minutes from $t = 0$ until the tank is empty.

11. Graph function F .



12. Write an equation giving $F(t)$ in terms of t . _____

13. What is the domain of function F ?

14. What is the range of function F ?

15. Evaluate $F(6)$. What does $F(6)$ represent in terms of the problem?

16. If $F(t) = 45$, then find the value of t . Describe what this value of t represents in terms of the problem.

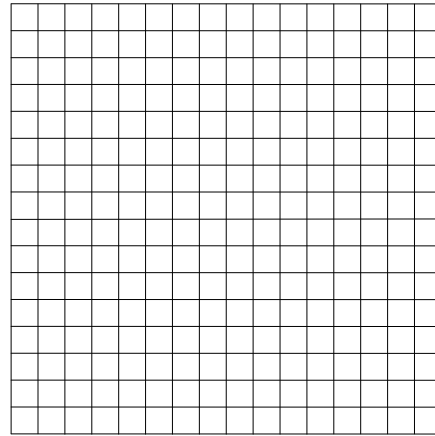
General Algebra II Worksheet #6 Unit 6 page 3

A rectangular water tank is 8 feet long, 5 feet wide, and 4 feet deep. The tank is half full initially and water is pumped into the tank at 5 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.

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

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

19. Graph function f .



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

21. What is the domain of function f ?

22. What is the range of function f ?

23. Evaluate $f(10)$. What does $f(10)$ represent in terms of the problem?

24. If $f(t) = 33$, then find the value of t . Describe what this value of t represents in terms of the problem.