

Kerry Ojakian's MTH 28.5 Class
Class Assignment #13

1. Let $f(x) = 5x - 2$. Evaluate $f(2)$ and $f(0)$.
2. Let $f(t) = 10 - 5t$. Evaluate $f(2)$ and $f(0)$.
3. Let $g(x) = 4 + 3x^2$. Evaluate $f(2)$ and $f(-2)$.
4. Let $h(x) = 5 + 2x^3$. Evaluate $f(2)$ and $f(-2)$.
5. Let $h(u) = \frac{5+u}{u-5}$. Evaluate $f(0)$ and $f(-1)$.

Recall from class, that the time, in seconds, that it takes for an object to hit the ground, is given by the function:

$$f(d) = (1/4)\sqrt{d},$$

where d is the distance dropped (in feet).

6. If the object is dropped from 64 feet how long does it take?
7. If the object is dropped from 25 feet how long does it take?
8. If the object is dropped from 100 feet how long does it take?

Some questions to make you think! ...

9. Let $f(x) = 5x+100$. Put the following values in order without evaluating: $f(20)$, $f(10)$, $f(100)$. Explain.
10. Let $f(x) = -5x$. Put the following values in order without evaluating: $f(20)$, $f(10)$, $f(100)$. Explain.
11. Let $f(x) = 5x - 10$. For what x is the function value positive?
12. Let $f(t) = 10 - 5t$. For what t is the function value negative?
13. Let $g(x) = 4 + 3x^2$. Are $g(20242024)$ and $g(-20242024)$ equal? Why?
14. Let $h(x) = 5 + 2x^3$. Are $h(20242024)$ and $h(-20242024)$ equal? Why?

Graph the following functions.

15. $f(x) = 2x + 1$

16. $g(x) = 2x$

17. $h(x) = (\frac{1}{2})x + 1$

18. $f(x) = -2x + 3$

19. $f(x) = -2x - 3$