Kerry Ojakian's MTH 23.5 Class
Class Assignment #7

Evaluate the following expressions

1. $x + 3$ if $x = 5$
2. $x + 3$ if $x = 10$
3. $a + 6b$ if $a = 4$, $b = 8$
4. $a + 6b$ if $a = -7$, $b = -2$
5. $4xy$ if $x = 4$, $y = -3$
6. $x^2 - y^2 + 3$ if $x = 2$, $y = 3$
7. $x^2 - y^2 + 3$ if $x = -2$, $y = 1$
8. $x^2 - y^2 + 3$ if $x = -1$, $y = -3$

Evaluate the following expressions

9. $2a - \dfrac{b}{6}$ if $a = 5$, $b = 18$

10. $2a - \dfrac{b}{6}$ if $a = 5$, $b = -18$

11. $x^2 - y^2$ if $x = -4$, $y = 0$

12. $x^2 - y^2$ if $x = 0$, $y = -4$

Evaluate using the formula.

13. Suppose a rectangle has a length L and width W. Its area is $L \cdot W$. Its perimeter is: $2L + 2W$.

    (a) Find the area of a rectangle with width 5 and length 7.

    (b) Find the perimeter of a rectangle with width 5 and length 7.

    (c) What is the area of a square Manhattan block if the length of one block is 50 feet? If you walk around the whole square block, what distance did you walk?

    (d) What is the area of a rectangular playground if its length is 97 meters and its width is 100 meters.

    (e) Find the rectangle whose area is equal to its perimeter.

14. Suppose a circle has radius r. Its area is πr^2. Its perimeter is: $2\pi r$.

    (a) Find the area of a circle with radius 4.

    (b) Find the perimeter of a circle with radius 4.

    (c) Suppose you have 5 circles, each of radius 3. What is the total area of the 5 circles?

    (d) Find a circle whose area is equal to its perimeter.