Assignment #1 20 pts.	A201/A505 Object Oriented Programming (Visual Basic .Net)	Due Date: Submit Assign 1, and Labs (1, 2, 3, 4) on or before Sept 5, 2016
		8:AM

Part 1:

Write an algorithm to solve the following problems: (Note: You do not need to write a program)

1) We want to know how many cubic feet are in a rectangular solid of a given Height, Width, and Length. (Hint, the Height, Width and Length are inputs to problem, and the cubic feet is the output, and number of cubic feet is equal to Length times Width times Height)

2) User enters an integer and the program tells the user if number is odd or even. (Hint read about the MOD operator)

3) User enters an integer number (representing the number of seconds), and the program will convert the seconds to the equivalent number of minutes and seconds. (Hint, read about the "/", "\", and "MOD" operators)

Part 2:

Learn the art and science of algorithm design and program implementation.

You have been hired to work at a summer camp. Part of your responsibility is to organize the pizza night. Assume you are trying to feed 112 kids. Each kid will eat 2 pieces of pizza. Each piece is about 15 Sq. inches. The pizzeria offers the following menu items:

Pizza size Diameter (inch)	Price			
10	\$ 5.99			
14	\$ 9.99			
20	\$ 18.99			



If you are asked to order only one size pizza, and at the same time minimized the cost, what size pizza do you order? And how many do you order to feed all the kids?

Write a Visual Basic program which will calculate the following information for each of the items in the above menu:

Pizza size Diameter (inch) Radius (inch) Area (Sq. Inch) Price Feeds No. of kids Cost per sq. inch No. of Pizzas needed for 112 kids Cost of Pizza fro Feeding 112 kids The above program is designed to encourage the use of the following constructs: (Feel free to work on this part with others in class)

- Constants (
- Arithmetic operators
- Conditional operators
- Conditional Statement
- Output Statements

(const) (+ , - , / , \, * , mod) (= , <= , >= , <>) (if, if-then-else)

(Console.Writeline())

Constructing your program:

- Step 1: Create a new 'Windows or Console' application for the above problem.
- Step 2: Algorithm design. Write the pseudocode (this may take several revisions). Then test your algorithm by performing a walk through on paper.
- Step 3: Implementation. Convert your algorithms to Visual Basic language. Test your programs to ensure it works for all valid data.
- Step 4: Document your program according to the programming style document provided.
- Step 5: Print each program listing.
- Step 6: Run the program, capture and print the output.

Sample Output:

C	Pizza size Diameter (inch)	Radius (inch)	Area (Sq. Inch)	Price	Feeds No. of kids	Cost per sq. inch	No. of Pizzas needed for 112 kids	No. of Pizzas needed for 112 kids (Actual)	Cost of Pizza for Feeding 112 kids
	10	5	78.54	5.99	2.62	0.076267049	42.78	43.00	\$ 257.57
	14								
	20								

Hand in the following:

- 1) Pseudocode for the above program (typed as comments in the beginning of your program)
- 2) Source listing for the program (properly documented, see style guidelines on the web site)
- 3) Output of the program
- 4) Copy and Paste all the above in to a word document and put it in your drop box for the course. Send me an email indicating that you have done so. Also, make sure the formatting in the Word document is proper. You may have to use the landscape mode or reduce the font size to reduce wrap around of your code.

Slice size (sq. inch): 15

Pizza size Diameter (inch)	Radius (inch)	Area (Sq. Inch)	Price	Feeds	Cost per sq. inch	No. of Pizzas needed for 112 kids	No. of Pizzas needed for 112 kids	Cost of Pizza fro Feeding 112 kids
10	5	78.54	\$ 5.99	2.62	0.076267049	42.78	43.00	257.57
14	7	153.94	\$ 9.99	5.13	0.064896240	21.83	22.00	219.78
20	10	314.16	\$ 18.99	10.47	0.060447047	10.70	11.00	208.89