

Sheet #1

1- Identify and correct the errors in each of the following statements. (*Note:* There may be more than one error per statement.)

- a) if (number => largest)
 largest == number;
- b) x=5
- c) cout >> x
- d) cin<< y

2- Write a single C statement or line that accomplishes each of the following:

- a) Print the message "Enter two numbers."
- b) Assign the product of variables b and c to variable a.
- c) State that a program performs a sample payroll calculation (i.e., use text that helps to document a program).
- d) Input three integer values from the keyboard and place these values in integer variables a, b and c.

3- State which of the following are true and which are false. If false, explain your answer.

- a) C operators are evaluated from left to right.
- b) The following are all valid variable names:
_under_bar_, m928134, t5, j7, her_sales, his_account_total, a, b, c, z, z2.
- c) The statement cout << "a = 5"; is a typical example of an assignment statement.
- d) A valid arithmetic expression containing no parentheses is evaluated from left to right.
- e) The following are all invalid variable names: 3g, 87, 67h2, h22, 2h.

4- Fill in the blanks in each of the following:

- a) What arithmetic operations are on the same level of precedence as multiplication?
.....
- b) When parentheses are nested, which set of parentheses is evaluated first in an arithmetic expression?
- c) A location in the computer's memory that may contain different values at various times throughout the execution of a program is called a

5- Given the equation $y = ax^3 + 7$, which of the following, if any, are correct C statements for this equation?

- a) $y = a * x * x * x + 7;$
- b) $y = a * x * x * (x + 7);$
- c) $y = (a * x) * x * (x + 7);$
- d) $y = (a * x) * x * x + 7;$
- e) $y = a * (x * x * x) + 7;$
- f) $y = a * x * (x * x + 7);$

6- State the order of evaluation of the operators in each of the following C statements and show the value of x after each statement is performed.

- a) $x = 7 + 3 * 6 / 2 - 1;$
- b) $x = 2 \% 2 + 2 * 2 - 2 / 2;$
- c) $x = (3 * 9 * (3 + (9 * 3 / (3))));$

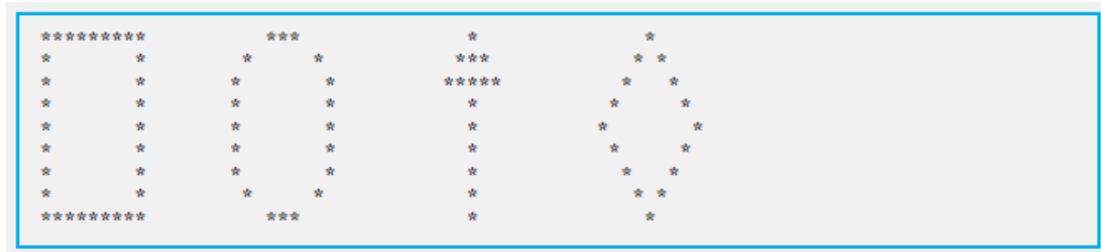
7- Write a program that asks the user to enter two numbers, obtains them from the user and prints their sum, product, difference, quotient and remainder.

8- Write a program that asks the user to enter two integers, obtains the numbers from the user, then prints the larger number followed by the words "is larger." If the numbers are equal, print the message "These numbers are equal."

9- Write a program that inputs three different integers from the keyboard, then prints the sum, the average, the product, the smallest and the largest of these numbers.

10- Write a program that reads in the radius of a circle and prints the circle's diameter, circumference and area. Use the constant value 3.14159 for Pi.

11- Write a program that prints the following shapes with asterisks.



12- Write a program that reads an integer and determines and prints whether it is odd or even. [Hint: Use the remainder operator. An even number is a multiple of two. Any multiple of two leaves a remainder of zero when divided by 2.]

13- Write a program that reads in two integers and determines and prints if the first is a multiple of the second. [Hint: Use the remainder operator.]

14- write a program that calculates the squares and cubes of the numbers from 0 to 10 and uses tabs to print the following table of values

number	square	cube
0	0	0
1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	216
7	49	343
8	64	512
9	81	729
10	100	1000