

Sheet 1

- 1) Write a complete C++ program that prints your name and age in the following format: -
 - “ Ali Welcome to Future University in Egypt you are 20 years old”.
- 2) Write a program to print "This is a C++ program" divided among two lines.
- 3) Using C++ create a variable named firstName this variable should be of type Character and assign your first name (first letter only).
- 4) Using C++ create two variables firstName and lastName these variables should be of type Character and assign your first name (first letter only) and you last name (first letter only).
- 5) Using C++ create 3 variables give them the names that you want variables should be of type INTEGER and assign any values .
- 6) Using C++ create a variable named studentID and a variable named age these variable should be of type INTEGER and assign your age and ID.
- 7) Create a C++ program that prints your Student ID and your age using the variables that you have initialized before.
- 8) Write a complete C++ program that takes your Student ID and your age and prints this format: - “20181234 Welcome to Future University in Egypt you are 20 years old”, the Student ID and age should be variables not fixed values.
- 9) Write a program that will read two integer numbers from the keyboard and then print their sum on the screen
- 10) Write down the output of the above program, Modify the program above so it also prints difference, product and their modules.
- 11) Write a program to calculate the perimeter and area of the square after entering the length.
- 12) Write a program to calculate area of circle.

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- 13) Write a program to read 4 numbers from the user and do the following: -
- Add the first number to the second number and result to second number
 - Increment the second number by 1
 - Increment third number by 3
 - Decrement fourth number by 1
 - Multiply third number by 6
 - Divide fourth number over third number
- 14) Write a program to calculate value of X as following
 $X = A^2 + B - 2$
where A and B are integers entered by the user.
- 15) Write a C++ program that reads the radius r of a circle, then computes and prints the diameter, the circumference, and the area of the circle. Use the constant value 3.14 for pi (π), and use the following formulas:
Diameter = $2r$
Circumference = $2 \pi r$
Area = πr^2
- 16) Write a C++ program that reads the length (L) and width (W) of a rectangle, then computes and prints the area and perimeter the rectangle. Use the following formulas:
Perimeter = $2(L+W)$
Area = LW
- 17) Write a C++ program that computes the area of a triangle with base b and high h.
Using the following formula:
Area = $\frac{1}{2} b h$.
- 18) Write a program to convert temperature in degrees Fahrenheit to degrees Celsius using the following formula :
celsius = $(5/9) * (fahrenheit - 32)$.
- 19) Write a program that inputs a five-digit number, separates the number into its individual digits and prints the digits separated from one another by three spaces each. [Hint: Use integer division and the modulus operator.]
For example:
If the user types in 12345 the program should print 1 2 3 4 5