**Section 1.1 Conclusion**

1. List the five main components of a computer?

* Input devices: allows communication to the computer
* Output devices: allows communication to the user
* Processor: CPU
* Main memory: memory location containing the running program
* Secondary memory: permanent record of data often on a disk

1. List the data for a program that adds two numbers?

* int

1. Describe the work of a compiler?

* Translate high-level language to machine language

1. Define source code?  Define object code?

* Source code: the original program in a high-level language
* Object code: the translated version in a machine language

1. Describe the purpose of the operating system?

* Allows us to communicate with the computer
* Is a program
* Allocates the computer’s resources
* Responds to user request to run other programs

**Section 1.2 conclusion**

1. Describe the first step to take when creating a program?
2. List the two main phases of the program design process?

* Problem solving phases: result is an algorithm that solves the problems
* Implementation phase: result is the algorithm translated into a programming language

1. Explain the importance of the problem-solving phases?

* Be certain the task is completely specific
  + What is the input
  + What information is in the output
  + How is the output organized
* Develop the algorithm before implementation
  + Experience shows this saves time in getting your program to run
  + Test the algorithms for correctness

1. List the steps in the software life cycle?

* Analysis and specification of the task: problem definition
* Design of the software: object and algorithm design
* Implementation: coding
* Maintenance and evolution of the system
* Obsolescence

**Section 1.3 conclusion**

1. Describe the output of this line: cout <<”C++ s easy to understand.”;

* output : C++ is easy to understand.

1. Explain what this line does: cin>>pears\_per\_pos;

* User input for pears\_per\_pos

1. Explain: #include <iostream>

* tell compiler where to find information about item used in the program
* iostream is a library containing definition of cin and cout

**Section 1.4 conclusion**

1. describe the three kinds of programs errors?

* Syntax errors
  + Violation of the grammar rules of the language
  + Discovered by the compiler
    - Error message may not always show correct location of errors
* Run-time errors
  + Error conditions detected by the computer at run time
* Logic error
  + Error in the program’s algorithm
  + Most difficult to diagnose
  + Computer does not recognize an error

1. Tell what kind of errors the compiler catches?

* Syntax error

1. What kind of error is produced if you forget a punctuation symbol such as semi-colon?

* Run time error

1. Tell what type of error is produced when a program runs but produces incorrect results?

* Logic error