1. B. CPU

3. A. Address

5. B. a stream of binary numbers

7. C. key words

9. A. punctuation

11. A. syntax

13. B. byte code

**Find the Error**

1. area = width X length

Display “What is the room’s width?”

Input width.

Display “What is the room’s length?”

Input length.

**Multiply width X length and assign this to the area variable**

Display area

**Algorithm Workbench**

1. Display “What is the customer’s maximum amount of credit?”

Input customer’s maximum amount of credit.

Display “What is the amount of credit used by the customer?”

Input the amount of credit used by the customer.

Subtract the amount of credit used by the customer from the customer’s maximum amount of credit and assign this value to available credit variable.

Display available credit.

2. Display “What is the starting balance?”

Input starting balance.

Display “What is the total dollar amount of deposits made?”

Input deposit amount.

Display “What is the total dollar amount of withdrawals made?”

Input withdrawal amount

Display “What is the monthly interest rate?”

Input monthly interest rate.

Add deposit amount to the starting balance and subtract the withdrawal amount from this sum. Multiply this all by the monthly interest rate and assign this to current balance.

Display current balance.

**Predict the Result**

1. 11

**Short Answer**

1. Main memory holds the data and the sequences of instructions for the programs that are running. Once the computer is turned off this memory will be erased. Usually important data is stored into secondary storage as this data will remain even after the computer is turned off.

3. Operating system software manages the hardware devices and the controls of the computer while application software makes the computer useful through programs.

5. It’s easier to write a program in a high-level language than in a machine language because a machine language is a compilation of zeros and ones while a high-level language actually uses words to help create the program.

7. Syntax errors deal with errors that violate the rules of the language, for example if a line is missing a semicolon where a semicolon is necessary then that would be a syntax error. Logical errors deal with errors in the program that could lead to faulty results, such as a mistake in a mathematical equation.

9. A compiler is a program that translate source code and turns it into an executable form.

11. Java applets are safe to download and execute because web browsers run them in a secure environment that does not allow the applets to gain access to resources outside of that environment.

13. Machine code language can be directly executed by the CPU while byte code can’t.

15. Encapsulation is a characteristic of object-oriented programming.

17. The method forms an interface through which outside code may access the object’s data.

19. No it will not.

21. javac LabAssignment.java