Activity – Vole Instructions

While completing this activity you will need to reference Appendix C in your textbook.

Activity One – Reading Vole Instructions

The following are computer instructions written in the Vole machine language. Using Appendix C in your book, translate these instructions to English.

1. 0x7123

2. 0x40E1

3. 0xA304

4. 0xB100

5. 0x2BCD

6. 0x1739

7. 0x3C2A

8. 0xC000

9. What is the difference between 0x1456 and 0x2456?

Activity Two – Writing Vole Instructions

Translate the following instructions from English to Vole

1. LOAD register 0x6 with the value 0x77

2. LOAD register 0x6 with the contents of memory cell 0x77

3. JUMP to the instruction at memory location 0x24 if the contents of register 0x0 equals the value in register 0xA

4. AND the contents of registers 0xE and 0x2 leaving the result in register 0x1

5. MOVE the bit pattern found in register 0x7 to register 0xC

6. STORE the bit pattern found in register 0xA in the memory cell whose address is 0x27

Activity Three – Considering Vole Instructions

Classify each of the following Vole instructions int terms of whether its execution:

- changes the contents of the memory cell at location 0x3C
- retrieves the contents of the memory cell at location 0x3C
- is independent of the contents of the memory cell at location 0x3C

1. 0x353C

2. 0x253C

3. 0x3C3C

4. 0x403C

5. 0x153C