

***Introduction to Programming with Java 3rd edition
Dean Solutions Manual***

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1. For each of the following computer system components, identify parallel components in or around a human.
 - a) input devices: eye, ear, nose, mouth, or skin (temperature or touch).
 - b) output devices: mouth, hands, waste elimination organs, or skin (heat or sweat).
 - c) CPU: brain
 - d) auxiliary memory: written notes, a computer, or a printed book.

2. main memory auxiliary memory
RAM CD
 solid-state drive
 hard disk

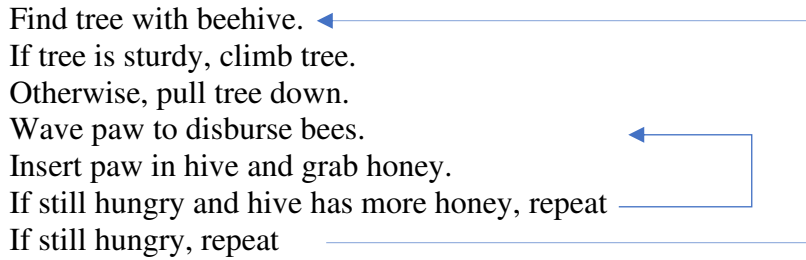
3. There are eight bits in a byte.

4. The number 9 in 32-bit binary representation is
00000000 00000000 00000000 00001001

5. C : usually refers to the first hard disk drive.

6. Moore's Law is the observation made in 1965 by Gordon Moore, co-founder of Intel, that the number of transistors in a single integrated circuit (on a single silicon chip) increases exponentially in time, doubling every two years. Over the 35 years from 1971 to 2006 the number of transistors on a single chip increased from a little over 2,000 to about 1,500,000,000. This corresponds to a doubling approximately every 22 months. In 2005 Moore said, "We have another 10 to 20 years before we reach a fundamental limit."

7. Arrange statements that describe an algorithm for a bear gathering honey.



An acceptable alternative reverses the sequence of these two statements:

Wave paw to disburse bees.
Insert paw in hive and grab honey.

8. Source code is a set of instructions written in a programming language that is relatively easy for humans to understand. Object code is a set of binary-format instructions that can be directly run by a computer.

9. Bytecode is like source code in that it is generic. The same code works on many different types of computers.
Bytecode is like object code in that it is efficient. It has a format that works closely with computer hardware, so it runs fast.

10. The computer program that converts Java bytecode into a particular type of computer's machine code is a Java Virtual Machine (JVM).

11. The name of the compiler used for mobile devices and controllers is Java Micro Edition, or Java ME.