

AP Computer Science A - Unit 1 Review Problems

Name: _____

Date: _____

1. Convert 29 decimal to binary and hexadecimal.

1. binary: _____

hexadecimal: _____

2. Convert 3A5F hexadecimal to binary and decimal.

2. binary: _____

decimal: _____

3. Convert the binary number 10011011 to hexadecimal and decimal.

3. decimal: _____

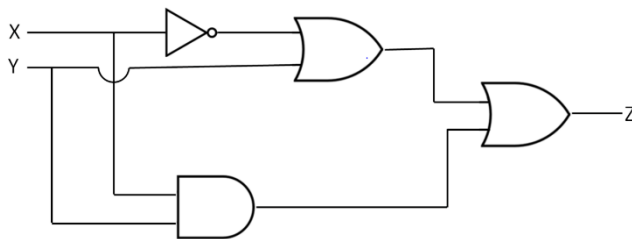
hexadecimal: _____

4. Uncompressed audio on an audio-CD is sampled 44,100 times per second at 16 bits per sample for each of 2 channels. How many bytes would it take to store 5 minutes of uncompressed audio? What would that be in megabytes?

4. bytes: _____

Mbytes: _____

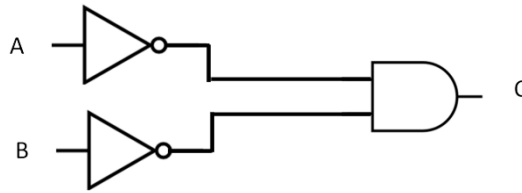
5. Construct a truth table for the following circuit:



5.

X	Y	Z

Use the following diagram for questions 6 and 7:



6. What is the value of C if A = True and B = False? 6. _____

7. What is the value of C if A = False and B = False? 7. _____

8. A typical college letter of recommendation is about 4080 characters long. If each character requires 2 bytes of storage, about how many letters can fit on a 512 MB flash drive (assume 1KB = 1024B, 1MB = 1024KB)? 8. _____

9. What is the difference between java.exe and javac.exe (these filenames are on a Windows system)?

10. How do the terms java compiler, bytecode, source code, and java interpreter relate to each other?

11. What is a valid java source file name?

12. Write a complete class file that prints out "Hello, World!" to the console.