

Name: _____ Date: _____

Quiz 1

1. Calculate the decimal value of 156_7 . Show your work.
2. Convert the two numbers to

hexadecimal, octal, and binary: $16 \overset{3rB}{\overline{)59}}$ $8 \overset{13r3}{\overline{)107}}$
 $16 \overset{59r6.}{\overline{)950}}$ $8 \overset{107r1.}{\overline{)857}}$

950 _____, _____, _____
 857 _____, _____, _____

3. Compute $950 - 857$ using 2's complement addition. Use 12 bits for your word size. Show your work.
4. Convert 123.015 to binary. Show your work
5. Complete the values table for the following algorithm with $a[] = \{1, 5, 6\}$, $s = 7$, and $length = 3$.

```
int decimalValue (int a[], int s, int length) {
    int i, n = 0;
    for (i = 0; i < length; i++) {
        n += a[length - 1 - i] * pow(s,i);
    }
    return n;
}
```

i	a[length - 1 - i]	pow(s, i)	a[length - 1 - i] * pos(s, i)	n
0				
1				
2				
3				
4				