

Name:

Id#

ICS 103, Term 092

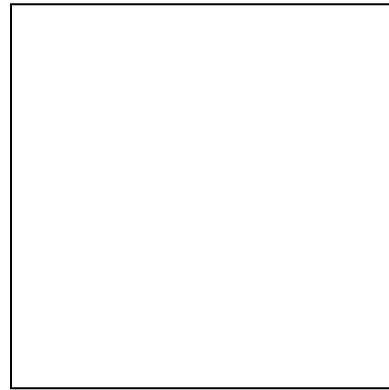
Computer Programming in C

Quiz# 2

Date: Sunday, April 11, 2010

Q1. Determine the output of the following program:

```
#include <stdio.h>
int main(void) {
int number, digits, sum;
digits=sum=0;
number=12345;
do {
    sum+=number%10;
    number=number/10;
    digits++;
}while (number>0);
printf ("%d\n%d\n", digits, sum);
return 0;
}
```



Q2. Rewrite the following shaded part using while loop instead of for loop:

```
#include <stdio.h>
int main(void) {
int i, j, p;
for(i=1, j=1, p=0; i<50 && j < 20; i*=2, j++)
    p+=i+2*j;
return 0;
}
```



Q3. The value of π can be determined by the series equation:

$$\pi = 4 \left(1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \frac{1}{9} - \frac{1}{11} + \frac{1}{13} - \dots \right)$$

Write a program that takes the **number of terms** as input and returns an approximation of the value of π for the given number of terms.