numDigits

Write a function that counts the number of digits for a non-negative integer. For example, 1234 has 4 digits. The function **numDigits1()** returns the result. The function prototype is given below:

```
int numDigits1(int num);
```

Write another function **numDigits2()** that passes the result through the pointer parameter, *result*. The function prototype is given below:

```
void numDigits2(int num, int *result);
```

For separate program testing: The following sample program template is given for testing the functions:

```
#include <stdio.h>
int numDigits1(int num);
void numDigits2(int num, int *result);
int main()
{
  int number, result=0;

  printf("Enter the number: \n");
  scanf("%d", &number);
  printf("numDigits1(): %d\n", numDigits1(number));
  numDigits2(number, &result);
  printf("numDigits2(): %d\n", result);
  return 0;
}
int numDigits1(int num)
{
  /* Write your code here */
}
void numDigits2(int num, int *result)
{
  /* Write your code here */
}
```

Some sample input and output sessions are given below:

(1) Test Case 1:

```
Enter the number:
1
numDigits1(): 1
numDigits2(): 1
```

(2) Test Case 2:

```
Enter the number:
13579
numDigits1(): 5
```

numDigits2(): 5