

```
total += n ;
i++ ;
}
```

4. What is displayed when the following program is run and the number 1234 is entered?

```
#include <stdio.h>
main()
{
    int num ;
    printf( "Please enter a number " ) ;
    scanf( "%d", &num ) ;
    do
    {
        printf( "%d", num % 10 ) ;
        num /= 10 ;
    }
    while ( num != 0 ) ;
}
```

5. The following program segment is intended to compute  $0.1 + 0.2 + 0.3 \dots + 99.8 + 99.9$ . It contains a flaw. What is it, and how would you correct it?

```
float sum = 0.0 ;
float i = 0.1 ;

while ( i != 100.0 )
{
    sum += i ;
    i += 0.1 ;
}
```

6. Write a program to find the sum of all the odd integers in the range 1 to 99.
7. Write a program to display all the hour and minute values in a 24-hour clock, i.e. 0:01 0:02 ... 12:59 0:00. How would you display the values in fifteen-minute intervals?
8. Write a program to display a Christmas tree.

```

*
***
*
***
*****
*
***
*****
*****
|
===V===
```

The tree consists of a series of tiers of increasing size. There are three tiers in the tree above. The program inputs the number of tiers from the keyboard.