1.14. For the following program, what are the possible outputs:

```
public class WhatIsX
{
    public static void f( int x )
      { /* body unknown */ }

    public static void main( String [ ] args )
    {
        int x = 0;
        f( x );
        System.out.println( x );
    }
}
```

In Practice

1.15. Write a `while` statement that is equivalent to the following `for` fragment. Why would this be useful?

```
for( ; ; )
    statement
```

1.16. Write a program to generate the addition and multiplication tables for single-digit numbers (the table that elementary school students are accustomed to seeing).

1.17. Write two static methods. The first should return the maximum of three integers, and the second should return the maximum of four integers.

1.18. Write a static method that takes a year as a parameter and returns `true` if the year is a leap year, and `false` otherwise.

Programming Projects

1.19. Write a program to determine all pairs of positive integers, (a, b), such that $a < b < 1000$ and $(a^2 + b^2 + 1)/(ab)$ is an integer.

1.20. Write a method that prints the representation of its integer parameter as a Roman numeral. Thus, if the parameter is `1998`, the output is `MCMXCVIII`.

1.21. Suppose you want to print out numbers in brackets, formatted as follows: `[1][2][3]`, and so on. Write a method that takes two parameters: `howMany` and `lineLength`. The method should print out line numbers from 1 to `howMany` in the previous format, but it should not output more than `lineLength` characters on any one line. It should not start a `[` unless it can fit the corresponding `]`.

1.22. In the following decimal arithmetic puzzle, each of the ten different letters is assigned a digit. Write a program that finds all possible solutions (one of which is shown).