

Key point: *Java expressions are evaluated in the same way as arithmetic expressions.*

Example: $\frac{3+4x}{5} - \frac{10(y-5)(a+b+c)}{x} + 9\left(\frac{4}{x} + \frac{9+x}{y}\right)$ can be translate to Java as
 $(3+4*x)/5-10*(y-5)*(a+b+c)/x+9*(4/x+(9+x)/y)$

- Multiplication, division, and remainder operations are applied first.
- Addition and subtraction operations are applied last.

Example:

$3 + 4 * 4 + 5 * (4 + 3) - 1$
 (1) inside parentheses first
 $3 + 4 * 4 + 5 * 7 - 1$
 (2) multiplication
 $3 + 16 + 5 * 7 - 1$
 (3) multiplication
 $3 + 16 + 35 - 1$
 (4) addition
 $19 + 35 - 1$
 (5) addition
 $54 - 1$
 (5) subtraction
 53

Listing 2.6 FahrenheitToCelsius.java

```

1  import java.util.Scanner;
2
3  public class FahrenheitToCelsius {
4      public static void main(String[] args) {
5          Scanner input = new Scanner(System.in);
6
7          System.out.print("Enter a degree in Fahrenheit: ");
8          double Fahrenheit = input.nextDouble();
9
10         //Convert Fahrenheit to Celsius
11         double celsius = (5.0/9)*(Fahrenheit-32);
12         System.out.println("Fahrenheit " + fahrenheit + " is " +
13             celsius + " in Celsius");
14     }
15 }
  
```

run:
 Enter a degree in Fahreheit: 100
 Fahrenheit 100.0 is 37.77777777777778 in Celsius
 BUILD SUCCESSFUL (total time: 7 seconds)

line#	fahrenheit	celsius
8	100	
11		37.777777777778