

## Exercise 02-Simple programs

1. Which of these variable declarations are valid?

```
a = b + 3 * (d + 1);  
b = c * c;  
c = b / 3;  
d = (byte) a + b;  
d = (byte) (a + b);
```

2. Given the following declarations:

```
long a = 3;  
int b = 4;  
short c = 5;  
byte d = 6;
```

Which values will you get from the following statements and which datatype do they belong to?

```
d/b*a  
c + b * (d + 1)  
d / (c - 1) * b / 2  
d%b  
-c % b  
c++ % d
```

3. Write a Java program that read in seconds and returns hours, minutes and seconds. For example 1234 should lead to 0:20:24. Test the program with the following: 0, 59, 60, 100, 3600 and 4000.
4. Write a program that reads the x and y coordinates of two points and calculates and displays the distance between them. Tipp: The integer of the square root of a number x can be obtained using `(int)Math.sqrt(x)`