

## Assignment 1

**Hand-in date: Monday 07-09-2015 15:00h**

1.1 Write a program that displays the following:

**Introductory Programming**  
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1.2 Write a program that computes and displays the result of:

$$\frac{9,5 * 4,5 - 2,5 * 3}{45,5 - 3,5}$$

1.3 Write a program that computes and displays the Area and Perimeter of a rectangle, with the width of **5,5** and height of **8,5** using the following formula:

**area = width \* height**

1.4 Translate the following algorithm into Java Code:

1. Declare a double variable named miles with initial value **100**
2. Declare a double constant named **KILOMETERS\_PER\_MILE** with value **1,609**
3. Declare a double variable named kilometers, multiply miles and **KILOMETERS\_PER\_MILE**, and assign the result to kilometers.
4. Display kilometers to the console

1.5 Write a program that reads an amount in an Integer (**int**) value from the console, then halves the amount and displays the result.

1.6 Write a program that reads in the length, width and height of a box and computes and displays the volume using the following formula:

$$V = Length \cdot Width \cdot Height$$

1.7 Write a program that reads an amount of minutes and displays the approximate number of years and days for the minutes. For simplicity, assume a year has 365 days and the resulting amount of days is a whole number.]

1.8 Assume the current population of USA is 312.032.486. The U.S. Census Bureau projects population based on the following assumptions:

- One birth every 7 seconds
- One death every 13 seconds
- One new immigrant every 45 seconds

Write a program to display the population in 5 years from now. For simplicity we assume that a year has 365 days. Note that the population should be a whole number.

1.9 Rewrite the program from exercise 1.8 to prompt the user to enter the number of years and displays the population after the number of years.