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| **Pre-AP® Computer Science** | **Lab 03D**  **1-Day Minor Java Assignment** |
| **The Visible Average Program** | **80 and 100 Point Versions** |
| **Assignment Purpose:**  The purpose of this program is to demonstrate the use of variables and mathematical expressions in a practical program. | |

Write a program that will define and initialize 5 integer variables; compute their sum, and then compute their average. The required average is the *mean*, which is computed by dividing the sum of the integers by the quantity of the numbers. You will do the same thing for 5 real numbers as well.

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| **Lab 03D Student Version** | **Do not copy this file, which is provided.** |
| **// Lab03Dst.java**  **// The Visible Average Program**  **// This is the student, starting version, of Lab 03D.**  **public class Lab03Dst**  **{**  **public static void main(String args[])**  **{**  **System.out.println("Lab 03D");**  **System.out.println();**    **int num1 = 11;**  **int num2 = 22;**  **int num3 = 33;**  **int num4 = 44;**  **int num5 = 55;**    **System.out.println();**  **}**  **}** | |

**80 Point Version**

The **80-point** version performs one average computation with 5 integers. Declare the numbers, **sum** and **average** as **int**.

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| ÏÏ«Ï ----jGRASP exec: java Lab03Dv80 ÏÏ§Ï ÏÏ§ÏLab 03D ÏÏ§Ï ÏÏ§Ï1st integer: 11 ÏÏ§Ï2nd integer: 22 ÏÏ§Ï3rd integer: 33 ÏÏ§Ï4th integer: 44 ÏÏ§Ï5th integer: 55 ÏÏ§Ï------------------- ÏÏ§ÏInt Total: 165 ÏÏ§ÏInt Average: 33 ÏÏ§Ï ÏÏ©Ï ----jGRASP: operation complete. |

**100 Point Version**

The **100-point** version adds additional program statements and variables. Add new variables for 5 more numbers, another **sum** and another **average**, but this time declare each variable a **double**. You will need to use different variable names for these new **double** variables.

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| ÏÏ«Ï ----jGRASP exec: java Lab03Dv100 ÏÏ§Ï ÏÏ§ÏLab 03D ÏÏ§Ï ÏÏ§Ï1st integer: 11 ÏÏ§Ï2nd integer: 22 ÏÏ§Ï3rd integer: 33 ÏÏ§Ï4th integer: 44 ÏÏ§Ï5th integer: 55 ÏÏ§Ï------------------- ÏÏ§ÏInt Total: 165 ÏÏ§ÏInt Average: 33 ÏÏ§Ï ÏÏ§Ï ÏÏ§Ï1st real num: 55.55 ÏÏ§Ï2nd real num: 66.66 ÏÏ§Ï3rd real num: 77.77 ÏÏ§Ï4th real num: 88.88 ÏÏ§Ï5th real num: 99.99 ÏÏ§Ï------------------- ÏÏ§ÏReal Total: 388.85 ÏÏ§ÏReal Average: 77.77000000000001 ÏÏ§Ï ÏÏ©Ï ----jGRASP: operation complete.  Remember, it is common for real number calculations to be a little off, but also notice that the answer is accurate to within 1 over 1 hundred trillion. |