

INF 260 003, Spring 2012 – Homework 2 (100 points)

DUE DATE: Tuesday, February 7, 12:15 pm

Part A – Review Questions (30 points)

1. Declare a double variable count with an initial value of 12.32, and declare a double constant PI with value 3.14.
2. What is the result of $42 / 5$? How would you rewrite the expression if you wished the result to be a floating-point number?
3. How would you write the following arithmetic expression in Java:

$$\frac{2-a}{3(2a+2)} - \frac{3-4b}{27a} + 5a + 2b - \frac{1-a}{2b+1}$$

What to turn in: Submit the answers to these questions by Tuesday, February 7, 2012, in the beginning of the class. You can handwrite or type in the answers. Write your name on every page!

Part B – Programming Exercises (70 points)

Programming Exercise 2.2 (page 63): (Computing the volume of a cylinder) Write a program that reads in (using Scanner) the radius and the length of a cylinder and computes and displays its volume using the following formulas:

$$\begin{aligned}\text{area} &= \text{radius} * \text{radius} * \pi \\ \text{volume} &= \text{area} * \text{length}\end{aligned}$$

Programming Exercise 2.5 (page 64): (Calculating tips) Write a program that reads (using input dialog boxes) the subtotal and the gratuity rate, and computes the gratuity and total. For example, if the user enters 10 for subtotal and 15 percent for gratuity rate, the program displays \$1.5 as gratuity and \$11.5 as total.

What to turn in: Submit the source code of your programs (the .java files) as e-mail attachments to campanal@nku.edu, by Tuesday, February 7, 2012, in the beginning of the class. Include some comments at the beginning of each program: your name, the course number, a brief description of what the program does. Please use your NKU e-mail account for submitting the homework and **bring in a hardcopy of your programs**.