

When doing the programming for this (and any future programming) assignment, be sure to follow the rules below:

- Be sure to follow the good programming practices established in class.
- Make sure you set Notepad++ to use F90 syntax highlighting prior to printing out your code. Make sure your printout is using only black and white printing. Printouts that employ gray-scale interpolated highlighting will not be accepted.
- Do not paste your code into a Word document. I will not accept such assignments.
- Staple your assignments before submitting them. I will not accept assignments that are not stapled.
- Make sure your name appears in each program somewhere near the top.

For this assignment, you should hand in a printout of your program with the results for the requested test cases pasted in at the bottom of your program.

- 1) (2 pts) Write an F90 program that will compute the area of a circle given the radius. Test your program using  $r = 0.56$ .
- 2) (2 pts) Write an F90 program that will compute the volume of a rectangular parallelepiped given the length, width and height. Test your program using  $l = 1.3, w = 4.9, h = 0.23$ .
- 3) (2 pts) Write an F90 program that will compute the surface area of a sphere given the radius. Test your program using  $r = 3.87$ .
- 4) (2 pts) Write an F90 program that will read in the values of  $x$  and  $y$  and compute the expression

$$z = x^2 + y^2 - 3.7xy.$$

Test your program for  $x = 1.5$  and  $y = -3.2$ .

- 5) (2 pts) Write a program that declares the variables  $i, j$  and  $k$  to be integers (the program shell on the course website shows you how to declare integers). Read in the values of  $i$  and  $j$  and have your program compute  $k = \frac{i}{j}$  and print the value of  $k$ . Run your program for several different values of  $i$  and  $j$ . Does your program give you the correct results?