1. Write a real-valued function \( \text{DIST}() \) that has as arguments the coordinates of two points \( P_1(x_1, y_1) \) and \( P_2(x_2, y_2) \), (i.e., there are a total of four real arguments) and returns the distance \( \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} \) between the points.

2. Write a real-valued function \( \text{NGRADE}() \) that accepts a letter grade as a single-character argument and returns the corresponding numeric value (i.e., A=4.0, B=3.0, C=2.0, D=1.0, and F=0.0). Your code should work for upper- or lower-case letters. Character comparisons are done using the same relational operators as always, i.e., test for equality with “.EQ.” Note that FORTRAN code is typically case insensitive but that doesn’t hold for character comparisons. “A” is not equal to “a”.

(continued on back)
3. Write a character-valued function `LGRADE()` that returns a letter grade based on the integer argument. The assignments should be based on 90-100=A, 80-89=B, 70-79=C, 60-69=D, and other scores are an F.