/\*-------------------------------------------------------\*/

/\* Sam Lee. \*/

/\* LAB 5, function that "returns" more than one value \*/

/\* Given the sides of a triangle, find the radius of \*/

/\* circles, one inscribed in a triangle, and the other \*/

/\* circumscribed about a triangle. \*/

#include "lab5.h"

int main(void)

{

double a, b, c; /\* sides of the triangle \*/

double radius\_inside; /\* radius of the inside circle \*/

double radius\_outside; /\* radius of the outside circle \*/

FILE \* data\_in; /\* input file pointer \*/

FILE \* data\_out; /\* output file pointer \*/

/\* Open the two required files \*/

data\_in = fopen(IN\_FILE, "r");

if (data\_in == NULL)

{

printf("Error on fopen file %s \n", IN\_FILE);

exit(EXIT\_FAILURE);

}

data\_out = fopen(OUT\_FILE, "w");

if (data\_out == NULL)

{

printf("Error on fopen file %s \n", OUT\_FILE);

exit(EXIT\_FAILURE);

}

/\* Print headers \*/

fprintf(data\_out, "\nSam Lee. Lab 5. \n\n");

fprintf(data\_out, " Triangle Sides Radius-Of-Circle \n");

fprintf(data\_out, " A B C Inside Outside \n");

fprintf(data\_out, "-------------------- ------ ------- \n");

/\* Loop thru the values to compute the two radii \*/

while ((fscanf(data\_in, "%lf%lf%lf", &a, &b, &c))== 3)

{

find\_two\_radii(a, b, c, &radius\_inside, &radius\_outside);

fprintf(data\_out,"%5.2f %5.2f %5.2lf %8.2f %8.2f \n",

a, b, c, radius\_inside, radius\_outside);

}

fprintf(data\_out,"\n");

fclose(data\_in);

fclose(data\_out);

return EXIT\_SUCCESS;

}

/\*-----------------------------------------------------------\*/