CIS 165 Review for Final Number due Monday 12/18/ at noon

1. Given the following function header: float calcTotal(float num1, int type)

a. What is the name of the function calcTotal

b. What type of value is returned by the function float

c. What types of values are passed to the function float, int

1. Indicate which of the following is a function prototype, a function header, or the function call.

1 void showNum(double num) float

2 void showNum (double); float

3 showNum(num); float

3. Write a function named calcArea that is passed a circle’s radius as a float. The function should calculate the area of the circle given the formula: A = πr2.

float calcArea(float radius)

{

float area = M\_PI \* pow(radius \* 2)

return area;

}

A. Write the function main that inputs the radius and then calls the function calcArea. Use a function prototype for the function.

int main()

{

float radius;

cout << “Enter the radius of the circle: “;

cin >> radius;

float area = calcArea(radius);

displayOutput(radius, area);

return 0;

}

B. Write a displayOutput function that displays the radius and the area of the circle.

void displayOutput(float radius, float area)

{

cout << “The radius of the circle is ” << radius << endl;

cout << “The area of the circle is ” << area << endl;

}

4. Write a while loop that will input 50 numbers and add them up.

count = 0;

sum = 0;

int number;

while(count < 50)

{

cout << "Enter a number: ";

cin >> number;

sum += number;

count++;

}

Rewrite this loop as a for loop

int sum = 0;

int number;

for (int i = 0; i < 50; ++i)

{

cout << "Enter number " << i + 1 << ": ";

cin >> number;

sum += number;

}

5. A program accepts two real numbers and a select code entered by the user. If the select code is 1, the program should add the two numbers and display the result, if the select code is 2 , the program should subtract the two numbers and display the result, and if the select code is 3, the program should multiply the two numbers and display the result. If the select code is not 1, 2, or 3, an error message should be displayed.

Draw the flowchart and write the **nested if statement** that does the above.

Hint: You need to use else ifs.