Assignment 1: Powers of 2

Turn in two flowcharts – one for part 1, the other for part 5.

1) Create a program that prints the powers of 2 from 0 to 20. Use an `int` to store the power.

2) Change the index to print the powers of 2 from 0 to 60. What does it print out? Why is there a negative value? What one word can you add the program to get rid of this one negative value and change nothing else?

3) Modify the program to use `long long int` rather than `int` for the power. Then print out the powers of 2 from 0 to 60. In order to print a `long long int`, use `%lld` rather than `%d` in the `printf` statement.

4) Change the program to use a `double` rather than a `long long int` (you will need to change the `printf` statement). Can you get rid of the zeros that print out to the right of the decimal? Try looking on the web (go google) for help on `printf` and `float/double` formats.

5) Modify the program so that it prints the powers of 2 from 0 to -20. Have the program print out 16 decimal places of accuracy. ( `%0.16f` in the `printf` statement).