

# Beginning C Programming for Engineers

In-class exercise, lesson 2

Name: \_\_\_\_\_

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Write a program that reads in the radius of a circle. Display both the circumference and the area of the circle. *Then indicate if the area is less than, greater than, or equal to the circumference.*

Since C does not have a built in value for  $\pi$ , use the approximation  $\pi \approx 3.14159$ . Let  $r$  be the radius,  $C$  be the circumference, and  $A$  be the area. Then recall:

$$C = 2\pi r$$

$$A = \pi r^2$$

For example, one run of your program might show:

```
Enter the radius: 1.0
Area = 3.14159
Circumference = 6.28318
The area is less than the circumference.
```

Another run might show:

```
Enter the radius: 10
Area = 314.159
Circumference = 62.8318
The area is greater than the circumference.
```

Feel free to create your own prompts and messages! Additionally, feel free to extend this program so that it repeats.