

## Quiz #1

ENGR 102-Fall 2019 (Spears)

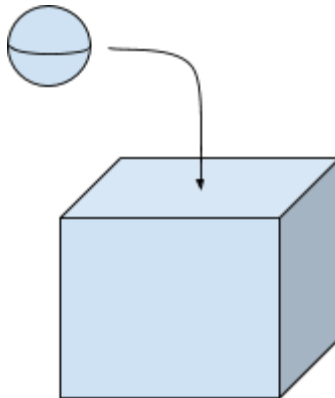
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Follow good coding practices as discussed in class, and include the standard header and useful code comments.

For full credit you must use the % and // operators.

Write a Python program that:

- defines the radius of a sphere as 4 cm.
- calculates the volume of the sphere ( $V_{\text{sphere}} = \frac{4}{3} \pi r^3$ )
- calculates how many complete times the sphere, if filled with liquid repetitively, could be emptied into a cube with a side length of 40 cm. Assume the sphere is perfectly filled, and perfectly emptied into the cube each time.
- outputs a descriptive sentence informing the user of this number.
- calculates how much volume is remaining in the sphere once the cube is filled.
- outputs a descriptive sentence informing the user of this value.



Sample output—your code will provide values in the blanks:

```
The sphere can be emptied into the cube a total of __ times.  
The sphere will have __ cm3 remaining once the cube is filled.
```