

This quiz covers, from *Calculus* by Stewart 6th ed., ET, Sections: 6.2, 6.3.

Fill-in-the blanks/boxes.

- **In 1a and 2a**, fill in the blank with: perpendicular or parallel.
- **In 1b, 1c, 1d, 2b, 2c**, fill in the blank with a formula involving *some of*:
 2 , π , radius , radius_{big} , radius_{little} , average radius , height , and/or thickness.

1. Disk/Washer Method

Let's say you revolve some region in the xy -plane around an axis of revolution so you get a solid of revolution. Next you want to find the volume of this solid of revolution using the disk or washer method.

1a. You should partition the coordinate axis (i.e., the x -axis or the y -axis) that is _____ to the axis of revolution.

1b. If you use the **disk method**, then the volume of a typical disk is:

_____ .

1c. If you use the **washer method**, then the volume of a typical washer is:

_____ .

1d. If you partition the z -axis, the $\Delta z =$ _____ .

2. Shell Method

Let's say you revolve some region in the xy -plane around an axis of revolution so you get a solid of revolution. Next you want to find the volume of this solid of revolution using the shell method.

2a. You should partition the coordinate axis (i.e., the x -axis or the y -axis) that is _____ to the axis of revolution.

2b. If you use the **shell method**, then the volume of a typical shell is:

_____ .

2c. If you partition the z -axis, the $\Delta z =$ _____ .