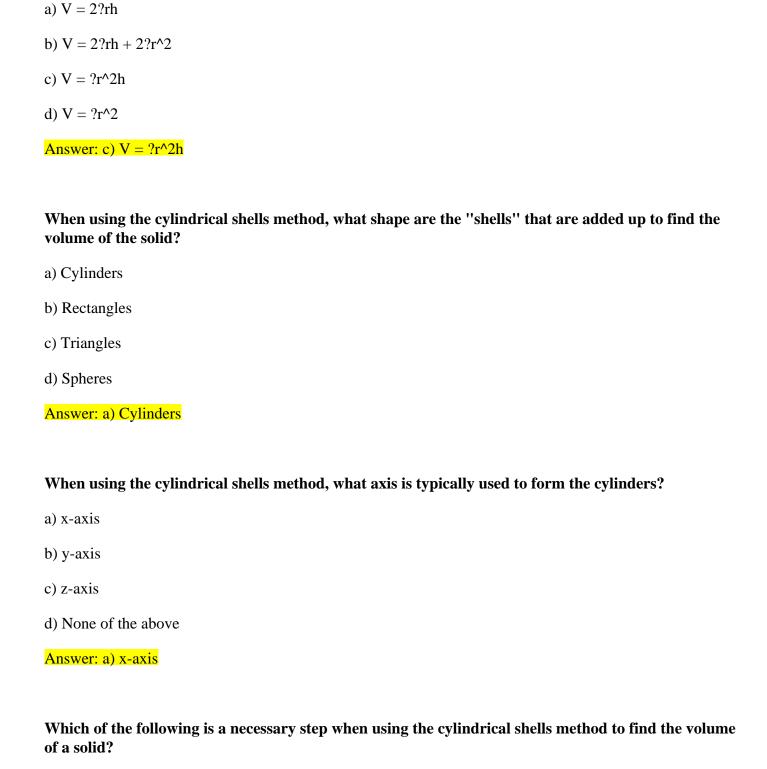
35 Lecture - MTH101

Important Mcqs

What is the formula for finding the volume of a solid using the cylindrical shells method?



a) Find the limits of integration

- b) Take the derivative of the function
- c) Solve for the area under the curve
- d) None of the above

Answer: a) Find the limits of integration

When using the cylindrical shells method, what is typically the function used to find the height of the shells?

- a) The function that defines the curve rotated about the axis
- b) The function that defines the axis of rotation
- c) The function that defines the radius of the shell
- d) None of the above

Answer: a) The function that defines the curve rotated about the axis

What is the typical range of the radius when using the cylindrical shells method?

- a) 0 to the length of the curve
- b) 0 to infinity
- c) 0 to the height of the curve
- d) None of the above

Answer: a) 0 to the length of the curve

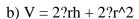
When using the cylindrical shells method, what is the typical range of the height of the shells?

- a) 0 to the length of the curve
- b) 0 to infinity
- c) 0 to the height of the curve
- d) None of the above

Answer: c) 0 to the height of the curve

What is the formula for finding the volume of a cylindrical shell?

a) V = 2?rh



c)
$$V = ?r^2h$$

d)
$$V = ?r^2$$

Answer: c) $V = ?r^2h$

What is the main advantage of using the cylindrical shells method over other methods for finding volumes?

- a) It is easier to set up
- b) It is more accurate
- c) It works for any solid of revolution
- d) None of the above

Answer: c) It works for any solid of revolution

What is the typical shape of the cross-sections of the solid when using the cylindrical shells method?

- a) Circles
- b) Rectangles
- c) Triangles
- d) Spheres

Answer: a) Circles