

34 Lecture - MTH101

Important Mcqs

What is the formula for finding the volume of a disk using integration?

- A. $V = \pi r^2$
- B. $V = \pi r^2 h$
- C. $V = \pi h^2/4$
- D. $V = \pi h^2/2$

Answer: B

When finding the volume of a washer using integration, what is the distance between the two radii?

- A. The thickness of the washer
- B. The diameter of the inner radius
- C. The diameter of the outer radius
- D. The difference between the two radii

Answer: A

What is the shape of the cross-section when finding the volume of a solid of revolution by slicing perpendicular to the axis of revolution?

- A. Rectangle
- B. Trapezoid
- C. Triangle
- D. Disk or washer

Answer: D

In which direction is the solid of revolution sliced when finding its volume using disks and washers?

- A. Perpendicular to the axis of revolution
- B. Parallel to the axis of revolution

- C. Along the axis of revolution
- D. Diagonal to the axis of revolution

Answer: A

What is the formula for finding the volume of a solid of revolution using disks?

- A. $V = \pi r^2$
- B. $V = \pi r^2 h$
- C. $V = \int [a,b] f(x)^2 dx$
- D. $V = \int [a,b] \pi f(x)^2 dx$

Answer: D

What is the formula for finding the volume of a solid of revolution using washers?

- A. $V = \pi r^2$
- B. $V = \pi r^2 h$
- C. $V = \int [a,b] f(x)^2 dx$
- D. $V = \int [a,b] \pi (R^2 - r^2) dx$

Answer: D

When finding the volume of a solid of revolution using washers, what does the term "R" represent?

- A. The radius of the solid at the outer edge of the washer
- B. The radius of the solid at the inner edge of the washer
- C. The radius of the washer itself
- D. The thickness of the washer

Answer: A

When finding the volume of a solid of revolution using washers, what does the term "r" represent?

- A. The radius of the solid at the outer edge of the washer
- B. The radius of the solid at the inner edge of the washer
- C. The radius of the washer itself

D. The thickness of the washer

Answer: B

What is the shape of the cross-section when finding the volume of a solid of revolution by slicing parallel to the axis of revolution?

A. Rectangle

B. Trapezoid

C. Triangle

D. Disk or washer

Answer: A

What is the formula for finding the volume of a solid of revolution by slicing parallel to the axis of revolution?

A. $V = \pi r^2$

B. $V = \pi r^2 h$

C. $V = \pi \int_a^b f(x) dx$

D. $V = \pi \int_a^b 2xf(x) dx$

Answer: D