34 Lecture - MTH101

Important Mcqs

What is the formula for finding the volume of a disk using integration?
A. $V = ?r^2$
B. $V = ?r^2h$
C. $V = \frac{h^2}{4}$
D. $V = \frac{h^2}{2}$
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. $V = ?r^2$

B. $V = ?r^2h$

C. $V = ?[a,b] f(x)^2 dx$

D. $V = ?[a,b] ?f(x)^2 dx$

Answer: D

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

A. $V = ?r^2$

B. $V = ?r^2h$

C. $V = ?[a,b] f(x)^2 dx$

D. $V = ?[a,b] ?(R^2-r^2) dx$

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	

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

Answer: B

- 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. $V = ?r^2$

B. $V = ?r^2h$

C. V = ?[a,b] f(x) dx

D. V = ?[a,b] 2?xf(x) dx

Answer: D