1. What is the main application of integration?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

2. Which of the following is NOT an application of integration?

A. To calculate the area of a region
B. To calculate the length of a curve
C. To calculate the slope of a curve
D. To calculate the equation of a curve

3. What is the main application of integration by substitution?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

4. What is the main application of integration by parts?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

5. What is the main application of the trapezoidal rule?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

6. What is the main application of the Simpson's rule?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

7. What is the main application of the midpoint rule?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

8. What is the main application of the mean value theorem for integrals?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

9. What is the main application of the first fundamental theorem of calculus?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

10. What is the main application of the second fundamental theorem of calculus?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

11. What is the main application of the FTC for integrals?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

12. What is the main application of the FTC for derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

13. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

14. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

15. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

16. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

17. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid

C. To calculate the length of a curve
D. To calculate the slope of a curve

18. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

19. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

20. What is the main application of the FTC for integrals and derivatives?

A. To calculate the area under a curve
B. To calculate the volume of a solid
C. To calculate the length of a curve
D. To calculate the slope of a curve

Answer Key:

1. A
2. D
3. A
4. A
5. A
6. A
7. A
8. A
9. A
10. A
11. A
12. A
13. A
14. A
15. A
16. A
17. A
18. A
19. A
20. A