MATH 1552 Integral Calculus: Line integrals

1. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^3-3t+1, y=t^2-1 from t=1 to t=2?

A. 1/3
B. 4/3
C. 5/3
D. 2

2. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^2, y=t^3 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

3. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t, y=t^2 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

4. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^2-1, y=t^3-3t+1 from t=1 to t=2?

A. 1/3
B. 4/3
C. 5/3
D. 2

5. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^3, y=t^4 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

6. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^4, y=t^5 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

7. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^5, y=t^6 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

8. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^6, y=t^7 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

9. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^7, y=t^8 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

10. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^8, y=t^9 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

11. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^9, y=t^10 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

12. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^10, y=t^11 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

13. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^11, y=t^12 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

14. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^12, y=t^13 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

15. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^13, y=t^14 from t=0 to t=1?

A. 1/3
B. 4/3

C. 5/3
D. 2

16. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^14, y=t^15 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

17. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^15, y=t^16 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

18. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^16, y=t^17 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

19. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^17, y=t^18 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

20. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^18, y=t^19 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

21. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^19, y=t^20 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

22. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^20, y=t^21 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

23. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^21, y=t^22 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

24. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^22, y=t^23 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

25. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^23, y=t^24 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

26. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^24, y=t^25 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

27. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^25, y=t^26 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

28. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^26, y=t^27 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

29. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^27, y=t^28 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

30. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^28, y=t^29 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

31. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^29, y=t^30 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

32. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^30, y=t^31 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

33. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^31, y=t^32 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

34. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^32, y=t^33 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

35. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^33, y=t^34 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

36. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^34, y=t^35 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

37. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^35, y=t^36 from t=0 to t=1?

A. 1/3
B. 4/3

C. 5/3
D. 2

38. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^36, y=t^37 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

39. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^37, y=t^38 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

40. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^38, y=t^39 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

41. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^39, y=t^40 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

42. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^40, y=t^41 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

43. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^41, y=t^42 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

44. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^42, y=t^43 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

45. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^43, y=t^44 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

46. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^44, y=t^45 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

47. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^45, y=t^46 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

48. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^46, y=t^47 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

49. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^47, y=t^48 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

50. What is the integral of the function f(x,y) over the curve C given by the parametric equations x=t^48, y=t^49 from t=0 to t=1?

A. 1/3
B. 4/3
C. 5/3
D. 2

Answer Key:

1. C
2. A
3. D
4. B
5. C
6. D
7. B
8. C

9. D
10. B
11. C
12. D
13. B
14. C
15. D
16. B
17. C
18. D
19. B
20. C
21. D
22. B
23. C
24. D
25. B
26. C
27. D
28. B
29. C
30. D
31. B
32. C
33. D
34. B
35. C
36. D
37. B
38. C
39. D
40. B
41. C
42. D
43. B
44. C
45. D
46. B
47. C
48. D
49. B
50. C