

# Cálculo 1 - Lista 6

Prof. Fabio Silva Botelho

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Calcule as integrais (Leithold Vol 1 página 302):

1. 
$$\int \sqrt{1-4y} dy$$

2. 
$$\int \sqrt[3]{3x-4} dx$$

3. 
$$\int \sqrt[3]{6-2x} dx$$

4. 
$$\int \sqrt{5r+1} dr$$

5. 
$$\int x\sqrt{x^2-9} dx$$

6. 
$$\int 3x\sqrt{4-x^2} dx$$

7. 
$$\int x^2(x^3-1)^{10} dx$$

8. 
$$\int x(2x^2+1)^6 dx$$

9. 
$$\int 5x\sqrt[3]{(9-4x^2)^2} dx$$

10. 
$$\int \frac{x dx}{(x^2+1)^3}$$

11. 
$$\int \frac{y^3}{(1-2y^4)^5} dy$$

12. 
$$\int \frac{s ds}{\sqrt{3s^2+1}}$$

13.

$$\int (x^2 - 4x + 4)^{4/3} dx$$

14.

$$\int x^4 \sqrt{3x^5 - 5} dx$$

15.

$$\int x \sqrt{x+2} dx$$

16.

$$\int \frac{t dt}{\sqrt{t+3}}$$

17.

$$\int \frac{2r dr}{(1-r)^7}$$

18.

$$\int x^3 (2-x^2)^{1/2} dx$$

19.

$$\int \sqrt{3-2x} x^2 dx$$

20.

$$\int x^3 (2-x^2)^{1/2} dx$$

21.

$$\int \cos(4\theta) d\theta$$

22.

$$\int \sin(x/3) dx$$

23.

$$\int 6x^2 \sin(x^3) dx$$

24.

$$\int (t/2) \cos(4t^2) dt$$

25.

$$\int \sec^2(5x) dx$$

26.

$$\int \operatorname{cosec}^2(2\theta) d\theta$$

27.

$$\int y \operatorname{cosec}(3y^2) \cot(3y^2) dy$$

28.

$$\int r^2 \sec^2 r^3 dr$$

29.

$$\int \cos x (2 + \sin x)^5 dx$$

30.

$$\int \frac{4 \sin x dx}{(1 + \cos x)^2}$$

31.

$$\int \sqrt{1 + \frac{1}{3x}} \frac{dx}{x^2}$$

32.

$$\int \sqrt{\frac{1}{t} - 1} \frac{dt}{t^2}$$

33.

$$\int 2 \sin x \sqrt{1 + \cos x} dx$$

34.

$$\int \sin(2x) \sqrt{2 - \cos(2x)} dx$$

35.

$$\int \cos^2 t \sin t dt$$

36.

$$\int \sin^3 \theta \cos \theta d\theta$$

37.

$$\int (\tan(2x) + \cot(2x))^2 dx$$

38.

$$\int \frac{(1/2) \cos(x/4)}{\sqrt{\sin(x/4)}} dx$$

39.

$$\int \frac{\cos(3x)}{\sqrt{1 - 2 \sin(3x)}} dx$$

40.

$$\int \frac{\sec^2(3\sqrt{t})}{\sqrt{t}} dt$$

41.

$$\int x(x^2 + 1) \sqrt{4 - 2x^2 - x^4} dx$$

42.

$$\int \frac{x(3x^2 + 1) dx}{3x^4 + 2x^2 + 1)^2}$$

43.

$$\int \sqrt{3+s}(s+1)^2 ds$$

44.

$$\int \frac{(y+3) dy}{(3-y)^{2/3}}$$

45.

$$\int (2t^2+1)^{1/3} t^3 dt$$

46.

$$\int \frac{(r^{1/3}+2)^4 dr}{\sqrt[3]{r^2}}$$

47.

$$\int \left(t + \frac{1}{t}\right)^{3/2} \left(\frac{t^2-1}{t^2}\right) dt$$

48.

$$\int \frac{x^3 dx}{(x^2+4)^{3/2}}$$

49.

$$\int \frac{x^3}{\sqrt{1-2x^2}} dx$$