Cálculo 1 - Lista 4 A

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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.
$$\int 2 \sin x \sqrt[3]{1 + \cos x} \, dx$$

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

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

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