Ex 1: $\int \left(-5x^2 + 2\cos^3(x)\right) dx = C - \frac{5x^3}{3} - \frac{2\sin^3(x)}{3} + 2\sin(x)$

Ex 2: $\int 3x \, dx = C + \frac{3x^2}{2}$

Ex 3: $\int 6\sin^3(x)\cos(x) \, dx = C + \frac{3\sin^4(x)}{2}$

Ex 4: $\int 5x^{\frac{7}{2}} \, dx = C + \frac{10x^{\frac{9}{2}}}{9}$

Ex 5: $\int 5x^2 \, dx = C + \frac{5x^3}{3}$

Ex 6: $\int \left(5\cos(x) + \frac{3}{x^2}\right) dx = C + 5\sin(x) - \frac{3}{x}$

Ex 7: $\int \left(2x^3 - 3\log(x)^2\right) dx = C + \frac{x^4}{2} - 3x\log(x)^2 + 6x\log(x) - 6x$

Ex 8: $\int 4x^4 \, dx = C + \frac{4x^5}{5}$

Ex 9: $\int \left(-5e^x + 3\log(x)\right) dx = C + 3x\log(x) - 3x - 5e^x$

Ex 10: $\int \left(2x - \frac{4}{x}\right) dx = C + x^2 - 4\log(x)$

Ex 11: $\int 3x^2\cos^2(x)\,dx = C + \frac{x^3\sin^2(x)}{2} + \frac{x^3\cos^2(x)}{2} + \frac{3x^2\sin(x)\cos(x)}{2} - \frac{3x\sin^2(x)}{4} + \frac{3x\cos^2(x)}{4} - \frac{3\sin(x)\cos(x)}{4}$

Ex 12: $\int \left(2x^3 + \log(x)\right)dx = C + \frac{x^4}{2} + x\log(x) - x$

x 13: $\int 2x^3\cos^3(x)\,dx = C + \frac{4x^3\sin^3(x)}{3} + 2x^3\sin(x)\cos^2(x) + 4x^2\sin^2(x)\cos(x) + \frac{14x^2\cos^3(x)}{3} - \frac{80x\sin^3(x)}{9} - \frac{28x\sin(x)\cos^2(x)}{3} - \frac{80\sin^2(x)\cos(x)}{9} - \frac{244\cos^3(x)}{27}$

Ex 14: $\int 5x^3\,dx = C + \frac{5x^4}{4}$

Ex 15: $\int 5x^2\sin(x)\,dx = C - 5x^2\cos(x) + 10x\sin(x) + 10\cos(x)$

Ex 16: $\int \left(-2\sqrt{x} + \frac{3}{x^2}\right) dx = C - \frac{4x^{\frac{3}{2}}}{3} - \frac{3}{x}$

Ex 17: $\int \left(\log(x) - 4\cos^3(x)\right) dx = C + x\log(x) - x + \frac{4\sin^3(x)}{3} - 4\sin(x)$

Ex 18: $\int \frac{\sin^3(x)}{\cos^3(x)} dx = C + \log(\cos(x)) + \frac{1}{2\cos^2(x)}$

Ex 19: $\int \left(5e^x + 4\log(x)\right) dx = C + 4x\log(x) - 4x + 5e^x$

Ex 20: $\int \frac{6\log(x)^2}{x} dx = C + 2\log(x)^3$