1. Resuelve las siguientes integrales:

(a) $\displaystyle\int 3\,dx$

(b) $\displaystyle\int ax\,dx,\ a \neq 0$

(c) $\displaystyle\int 4x^3\,dx$

(d) $\displaystyle\int x^4\,dx$

(e) $\displaystyle\int (x^4 - 4x^3)\,dx$

(f) $\displaystyle\int (2 - x^2 - 4x^3)\,dx$

(g) $\displaystyle\int (2x^5 - 4x + 3)\,dx$

(h) $\displaystyle\int (x+1)^2\,dx$

(i) $\displaystyle\int (x^3 + 2x - 1)\,dx$

(j) $\displaystyle\int 2\sqrt{x}\,dx$

(k) $\displaystyle\int \frac{1}{3}\sqrt[5]{x^3}\,dx$

(l) $\displaystyle\int \frac{1}{\sqrt[5]{x^4}}\,dx$

(m) $\displaystyle\int \frac{1}{\sqrt{8x}}\,dx$

(n) $\displaystyle\int \sqrt[3]{5x^2}\,dx$

(o) $\displaystyle\int (\sqrt{x} - \sqrt[3]{x} + 2x^{-3})\,dx$

(p) $\displaystyle\int \left(\frac{1}{\sqrt{x}} + \sqrt[3]{x}\right)\,dx$

(q) $\displaystyle\int \left(2x + \frac{1}{\sqrt[4]{x}}\right)\,dx$

(r) $\displaystyle\int \frac{1}{x^3}\,dx$

(s) $\displaystyle\int \frac{4}{x^4}\,dx$

(t) $\displaystyle\int \frac{1}{x^3}\,dx$

(u) $\displaystyle\int \left(\frac{4}{x^2} - \frac{3}{x^3}\right)\,dx$

(v) $\displaystyle\int \frac{4x^3 - 5x^2 + 6x}{x}\,dx$

(w) $\displaystyle\int \frac{4}{x}\,dx$

(x) $\displaystyle\int \left(\frac{1}{4x} - x^2 + \sqrt[4]{x}\right)\,dx$

(y) $\displaystyle\int \frac{-3x^2 + 2}{x}\,dx$

(z) $\displaystyle\int \frac{6x^3 - 8x^2 - x + 2\sqrt{x}}{x^2}\,dx$

(aa) $\displaystyle\int \frac{x^2 + 2x - 1}{x^2}\,dx$

(ab) $\displaystyle\int \frac{x^3 - 3x^2 + 2}{x}\,dx$

(ac) $\displaystyle\int \frac{x^3 - 6x^2 - 3x + 2}{x^2}\,dx$

2. Resuelve las siguientes integrales:

(a) $\displaystyle\int \left(5x^{\frac{4}{3}} - 4x^2\right)\,dx$

(b) $\displaystyle\int (e^2 - 2x + x^n)\,dx$

(c) $\displaystyle\int (2 - x)\sqrt{x}\,dx$

(d) $\displaystyle\int \left(-\frac{1}{x^4} + 5 + \frac{2}{\sqrt{x}}\right)\,dx$

(e) $\displaystyle\int \frac{(x-1)(x+3)}{\sqrt{x}}\,dx$

(f) $\displaystyle\int 3^x\,dx$

(g) $\displaystyle\int a^{5x}\,dx$

(h) $\displaystyle\int e^{-x}\,dx$

(i) $\displaystyle\int 5e^{4x+1}\,dx$

(j) $\displaystyle\int (e^x - 2^{x+1})\,dx$

(k) $\displaystyle\int \left(e^{2x} - \frac{2}{x}\right)\,dx$

(l) $\displaystyle\int xe^{x^2}\,dx$

3. Resuelve:

(a) $\int x(x^2-1)^4\,dx$

(b) $\int 2x(x^2-3)^3\,dx$

(c) $\int (x^3+4)^2 x^2\,dx$

(d) $\int (x^3+4)x^2\,dx$

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

(f) $\int (x+2)^4\,dx$

(g) $\int \left[(x+2)^4-(x+2)^2\right]\,dx$

(h) $\int \frac{1}{2\sqrt{x}}(2-\sqrt{x})\,dx$

(i) $\int \sqrt{4x-2}\,dx$

(j) $\int \frac{dx}{\sqrt{x+4}}\,dx$

(k) $\int \frac{x^2}{(x^3+5)^2}\,dx$

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

(m) $\int \frac{6x^2}{(x^3-2)^3}\,dx$

(n) $\int 3x\sqrt[3]{x^2+3}\,dx$

(o) $\int \frac{4x}{\sqrt{3x^2-2}}\,dx$

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

(q) $\int \left(4x^2\cdot\sqrt[5]{1-x^3}\right)\,dx$

(r) $\int \sqrt{x^2-5x^4}\,dx$

(s) $\int \frac{x\ln(x^2-1)}{x^2-1}\,dx$

(t) $\int (e^x+2)^4 e^x\,dx$

(u) $\int \frac{e^x}{(2e^x-5)^2}\,dx$

(v) $\int \frac{\ln x}{x}\,dx$

(w) $\int \frac{x\ln(x^2-2)}{x^2-2}\,dx$

(x) $\int \left(3e^{x^3}x^2-\frac{\ln x}{x}\right)\,dx$

(y) $\int \frac{\ln^2(x-2)}{x-2}\,dx$

(z) $\int \frac{(e^{2x}-x)\ln^3(e^{2x}-x^2)}{e^{2x}-x^2}\,dx$

4. Resuelve:

(a) $\int \frac{dx}{x+2}$

(b) $\int \frac{dx}{3x+2}$

(c) $\int \frac{x\,dx}{x^2-4}$

(d) $\int \frac{(2x-3)}{x^2-3x+5}\,dx$

(e) $\int \frac{x}{x^2+2}\,dx$

(f) $\int \frac{x^2}{2-x^3}\,dx$

(g) $\int \frac{4x}{5+3x^2}\,dx$

(h) $\int \frac{2x-2}{(x-1)^2}\,dx$

(i) $\int \frac{3x^2-4x-1}{3x^3-6x^2-3x}\,dx$

(j) $\int \frac{e^x}{e^x-2}\,dx$

(k) $\int \frac{dx}{\sqrt{x}(\sqrt{x}-1)}$

(l) $\int \frac{e^{2x-1}+3}{e^{2x-1}+6x}\,dx$

(m) $\int \frac{3}{x\ln x}\,dx$

(n) $\int \frac{5^{\sqrt{x}}}{\sqrt{x}}\,dx$

(o) $\int \frac{2e^{\sqrt{x}}}{\sqrt{x}}\,dx$

(p) $\int \frac{e^{\frac{1}{x}}}{x^2}\,dx$

(q) $\int e^{-x^2+2}\cdot x\,dx$

(r) $\int 4x^2\cdot e^{x^3-5}\,dx$

(s) $\int (e^x-2)^2\,dx$

(t) $\int \frac{1+\frac{1}{x}}{e^{x+\ln x}}\,dx$

(u) $\int \frac{3x}{2}\cdot 4^{x^2-1}\,dx$

(v) $\int \frac{2x^2\cdot 5^{x^3-2}}{3}\,dx$

(w) $\int \frac{e^{\sqrt[3]{x}}}{\sqrt[3]{x^2}}\,dx$

(x) $\int \frac{2x-3}{x(x-3)\ln(x^2-3x)}\,dx$

(y) $\int \frac{x}{2}\cdot 2^{2-4x^2}\,dx$

(z) $\int \frac{3\ln^2(\ln(x-2))}{x\ln(x-2)}\,dx$

(aa) $\int \left[\frac{e^{2x}}{2e^{2x}-1}-\frac{4}{x}\right]\,dx$

(ab) $\int \left[\frac{3e^{\sqrt[3]{x}}}{\sqrt[3]{x^2}}-\frac{1}{\sqrt{x}}+\frac{2x+6}{(x+3)^2}\right]\,dx$