

$$9. \int v(v^2+2)^2 dv \rightarrow \int v(v^4+4v^2+4) dx \rightarrow \int (v^5+4v^3+4v) dx$$

$$\frac{v^6}{6} + \frac{4v^4}{4} + 2v^2 + C$$

$$13. \int (\csc^2 x + -2e^x) dx \rightarrow \int \csc^2 x dx + \int -2e^x dx \rightarrow -\cot x + -2e^x + C$$

$$17. \int 2^x(4+5^x) dx \rightarrow \int (2^{x+2} + 10^x) dx \rightarrow \int 2^{x+2} dx + \int 10^x dx$$

$$\frac{2^x}{\ln(2)} + \frac{10^x}{\ln(10)} + C$$

$$23. \int_0^2 (2x-3)(4x^2+1) dx \rightarrow \int_0^2 (8x^3+2x-12x^2-3) dx$$

$$[2x^4+x^2-4x^3-3x]_0^2 \rightarrow 2-0=2 //$$

$$27. \int_0^x (5e^x + 3 \ln x) dx \rightarrow \int_0^x 5e^x dx + \int_0^x 3 \ln x dx$$

$$+ 5e^x - 3 \ln x \Big|_0^x \quad 118.70 - 2 = 116.70 //$$

$$39. \int_1^2 \frac{2x dx}{\sqrt[3]{x^3}} \rightarrow \int_1^2 \frac{2}{x^{1/3}} dx + \int_1^2 \frac{x}{x^{2/3}} dx \rightarrow 6\sqrt[3]{6} + \int_1^2 x^{1/3} dx \rightarrow 6\sqrt[3]{6} + \frac{3x^{4/3}}{4}$$