

Primitives niveau terminale - 16^{ième} feuille

$$A = \int \sqrt{(1-x^2)^3} dx$$

$$B = \int \ln(x + \sqrt{1+x^2}) dx$$

$$C = \int x \tan^2 x dx$$

$$D = \int \frac{\arctan x dx}{x^2}$$

$$E = \int x \cos^2 x dx$$

$$F = \int x^2 \sin x dx$$

$$G = \int x \sin^2 x dx$$


$$H = \int \frac{dt}{t^4 + 4t^2 + 3}$$

$$I = \int \frac{d\mu}{e^{4\mu} + 4e^\mu + 3}$$

$$J = \int x \ln \sqrt{x^2 + 2} dx$$

$$K = \int (x+1)^2 e^x dx$$

$$L = \int \operatorname{arcsec} x dx$$

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Réponse 16

$$A = \frac{3}{8} \arcsin x + \frac{1}{8} (5x - 2x^3) \sqrt{1 - x^2} + C, C \in \mathbb{R}$$

$$B = x \ln \left| x + \sqrt{1 + x^2} \right| - \sqrt{1 + x^2} + C, C \in \mathbb{R}$$

$$C = x \tan x - \frac{x^2}{2} + \ln |\cos x| + C, C \in \mathbb{R}$$

$$D = -\frac{\arctan x}{x} + \ln |x| - \ln \sqrt{1 + x^2} + C, C \in \mathbb{R}$$

$$E = \frac{x^2}{4} + \frac{x \sin 2x}{4} + \frac{\cos 2x}{8} + C, C \in \mathbb{R}$$

$$F = -x^2 \cos x + 2x \sin x + 2 \cos x + C, C \in \mathbb{R}$$

$$G = \frac{x^2}{4} - \frac{x \sin 2x}{4} - \frac{\cos 2x}{8} + C, C \in \mathbb{R}$$

$$H = \frac{1}{2} \arctan t - \frac{1}{2\sqrt{3}} \arctan \frac{t}{\sqrt{3}} + C, C \in \mathbb{R}$$

$$I = \frac{1}{12} (4\mu - 3 \ln(1 + e^{2\mu}) + \ln(3 + e^{2\mu})) + C, C \in \mathbb{R}$$

$$J = \frac{1}{4} (x^2 - 4) \ln |x + 2| - \frac{x^2}{8} + \frac{x}{2} + C, C \in \mathbb{R}$$

$$K = (x^2 + 1)e^x + C, C \in \mathbb{R}$$

$$L = x \operatorname{arcsec} x - \ln \left| x + \sqrt{x^2 - 1} \right| + C, C \in \mathbb{R}$$

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