

Primitives niveau terminale - 19^{ième} feuille

$$A = \int \ln(x + \sqrt{x^2 - 1})$$

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

$$C = \int \frac{dt}{t - \sqrt{1 - t^2}}$$

$$D = \int e^{-x} \arctan e^x dx$$

$$E = \int \arcsin \sqrt{x} dx$$

$$F = \int \ln(x + \sqrt{x}) dx$$

$$G = \int \arctan \sqrt{x} dx$$


$$H = \int \ln(x^2 + x) dx$$

$$I = \int \ln(\sqrt{x} + \sqrt{1 + x}) dx$$

$$J = \int \cos \sqrt{x}$$

$$K = \int \sin \sqrt{x}$$

$$L = \int \arctan \sqrt{x + 1} dx$$

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Réponse 19

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

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

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

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

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

$$F = x \ln |x + \sqrt{x}| - x + \sqrt{x} - \ln |1 + \sqrt{x}| + C, C \in \mathbb{R}$$

$$G = (x + 1) \arctan \sqrt{x} - \sqrt{x} + C, C \in \mathbb{R}$$

$$H = x \ln |x^2 + x| + \ln |x + 1| - 2x + C, C \in \mathbb{R}$$

$$I = \left(x + \frac{1}{2}\right) \ln(\sqrt{x} + \sqrt{1+x}) - \frac{1}{2} \sqrt{x^2 + x} + C, C \in \mathbb{R}$$

$$J = 2\sqrt{x} \sin \sqrt{x} + 2 \cos \sqrt{x} + C, C \in \mathbb{R}$$

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

$$L = (x + 2) \arctan \sqrt{x + 1} - \sqrt{x + 1} + C, C \in \mathbb{R}$$

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