Integrations

1. Evaluate:

$$\int_{0}^{\frac{1}{\sqrt{2}}} \frac{1}{\sqrt{1-x^2}} \ dx$$

2. Evaluate:

$$\int \frac{cos\sqrt{x}}{\sqrt{x}} \ dx$$

3. Evaluate:

$$\int \frac{dx}{\sqrt{5-4x-2x^2}}$$

4. Evaluate:

$$\int x sin^{-1}x \ dx$$

5. Evaluate:

$$\int_{0}^{\pi} \frac{xdx}{a^2 \cos^2 x + b^2 \sin^2 x}$$

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