

1. ESERCIZI SUGLI INTEGRALI

Calcolare i seguenti integrali indefiniti:

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|---|--|---|
| (1) $\int \sin^2 x \cos x \, dx$ | (14) $\int x \sin(3x + 1) \, dx$ | (26) $\int \frac{3x}{x^2 - 4x + 8} \, dx$ |
| (2) $\int 3x^2 \sqrt{x^3 + 1} \, dx$ | (15) $\int x e^{2x} \, dx$ | (27) $\int \frac{x+3}{\sqrt{x^2+2x+2}} \, dx$ |
| (3) $\int \frac{\cos \sqrt{x}}{\sqrt{x}} \, dx$ | (16) $\int e^x \cos x \, dx$ | (28) $\int \frac{2x^2+3x+4}{x+1} \, dx$ |
| (4) $\int \sin(x+1) \, dx$ | (17) $\int \frac{x}{\sqrt{9+x^2}} \, dx$ | (29) $\int \frac{dx}{\sqrt{2x-x^2}}$ |
| (5) $\int \cos(3x) \, dx$ | (18) $\int \sin^4 x \cos^5 x \, dx$ | (30) $\int \frac{dx}{2x^2+4x+7}$ |
| (6) $\int \frac{4x}{\sqrt{x^2+7}} \, dx$ | (19) $\int \sin(7x) \cos(5x) \, dx$ | (31) $\int \frac{x^3+1}{x^2+1} \, dx$ |
| (7) $\int x^2 \sqrt{x-1} \, dx$ | (20) $\int \frac{\sin x}{\cos^8 x} \, dx$ | (32) $\int \frac{dx}{\sqrt{2x-x^2}}$ |
| (8) $\int \sin^3 x \, dx$ | (21) $\int \sin^3 x \cos^2 x \, dx$ | (33) $\int \frac{\sqrt{x}}{1+x^{1/3}} \, dx$ |
| (9) $\int \ln x \, dx$ | (22) $\int \sin x \cos(2x) \, dx$ | (34) $\int \frac{dx}{1+\sqrt{x}}$ |
| (10) $\int x^2 e^{-x} \, dx$ | (23) $\int \frac{x^2}{\sqrt{9+x^2}} \, dx$ | (35) $\int \sqrt{1+e^x} \, dx$ |
| (11) $\int x \ln x \, dx$ | (24) $\int \frac{\sqrt{1+x^2}}{x} \, dx$ | (36) $\int \frac{e^x}{e^{2x}-4} \, dx$ |
| (12) $\int x^2 \ln x \, dx$ | (25) $\int e^x \sqrt{1-e^{2x}} \, dx$ | (37) $\int \frac{dx}{5-4x-2x^2}$ |
| (13) $\int x^2 \cos x \, dx$ | | |