

تمارين (7)

احسب التكاملات الآتية :

(1) $\int x e^{-x} dx$

(3) $\int \sin^{-1} x dx$

(5) $\int e^x \cos x dx$

(7) $\int \cos(\ln x) dx$

(9) $\int x \sin(3x + 5) dx$

(11) $\int x^2 \cos x dx$

(13) $\int e^{3x} \cos bx dx$

(15) $\int x \arctan x dx$

(2) $\int x \ln x dx$

(4) $\int x^3 e^x dx$

(6) $\int x^3 \log x dx$

(8) $\int e^{2x} \sin 5x dx$

(10) $\int x \sec^2 x dx$

(12) $\int \frac{x}{\sqrt{1-x^2}} dx$

(14) $\int x \sinh x dx$

(16) $\int x^3 e^{-x} dx$

أحسب التكاملات الآتية :

(1) $\int \frac{x}{x^2 - 5x + 6} dx$

(3) $\int \frac{3x^2 - 10}{x^2 - 4x + 4} dx$

(5) $\int \frac{2x^2 + 3}{x(x-1)^2} dx$

(7) $\int \frac{dx}{x^4 - 16}$

(9) $\int \frac{(2x^2 - 1) dx}{4x^3 - x^2 + 4x - 1}$

(2) $\int \frac{11x + 17}{2x^2 + 7x - 4} dx$

(4) $\int \frac{dx}{(x-2)^3}$

(6) $\int \frac{\sin x dx}{\sin^2 x + 4 \sin x - 5}$

(8) $\int \frac{(x^2 + 1) dx}{(x^2 + 2x + 3)^2}$

(10) $\int \frac{5x - 4}{x^2 - 4x} dx$