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2.1 次の定積分を計算せよ. ただし  $a$  は 0 でない定数とする.

(1)  $\int (2x + 6) dx$

(2)  $\int_0^5 (2x + 6) dx$

(3)  $\int (2x + 6)^4 dx$

(4)  $\int_{-3}^2 (2x + 6)^4 dx$

(5)  $\int \left(x^2 + \frac{1}{x^2}\right) dx$

(6)  $\int_1^2 \left(x^2 + \frac{1}{x^2}\right) dx$

(7)  $\int \sqrt{x} dx,$

(8)  $\int_0^1 \sqrt{x} dx,$

(9)  $\int \sqrt{2x + 1} dx,$

(10)  $\int_0^4 \sqrt{2x + 1} dx,$

(11)  $\int x\sqrt{2x + 1} dx,$

(12)  $\int_0^4 x\sqrt{2x + 1} dx,$

(13)  $\int \frac{1}{x} dx$

(14)  $\int_1^e \frac{1}{x} dx$

(15)  $\int e^x dx$

(16)  $\int_0^1 e^x dx$

$$(17) \int e^{2x+1} dx$$

$$(18) \int_0^1 e^{2x+1} dx$$

$$(19) \int \sin x dx$$

$$(20) \int_0^{\frac{\pi}{2}} \sin x dx$$

$$(21) \int_0^{\pi} \sin x dx$$

$$(22) \int \sin 2x dx$$

$$(23) \int_0^{\frac{\pi}{2}} \sin 2x dx$$

$$(24) \int_0^{\pi} \sin 2x dx$$

$$(25) \int \cos x dx$$

$$(26) \int_0^{\frac{\pi}{2}} \cos x dx$$

$$(27) \int_0^{\pi} \cos x dx$$

$$(28) \int \cos 2x dx$$

$$(29) \int_0^{\frac{\pi}{2}} \cos 2x dx$$

$$(30) \int_0^{\pi} \cos 2x dx$$