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3.2. $\int \frac{1}{x} dx = \ln|x| + C$

$$\frac{1}{x} = x^{-1} \Rightarrow \int x^{-1} dx = \frac{x^{-1+1}}{-1+1} + C = \ln|x| + C$$

4. $\int \frac{1}{x^2} dx = -\frac{1}{x} + C$

$\int \frac{1}{x^2} dx = \int x^{-2} dx = \frac{x^{-2+1}}{-2+1} + C = -\frac{1}{x} + C$

$\int \frac{1}{x^2} dx = -\frac{1}{x} + C$

5. $\int \frac{1}{x^3} dx = -\frac{1}{2x^2} + C$

6. $\int \frac{1}{x^4} dx = -\frac{1}{3x^3} + C$

6.1. $\int \frac{1}{x^4} dx = -\frac{1}{3x^3} + C$

$\int \frac{1}{x^4} dx = \int x^{-4} dx = \frac{x^{-4+1}}{-4+1} + C = -\frac{1}{3x^3} + C$

6.2. $\int \frac{1}{x^5} dx = -\frac{1}{4x^4} + C$

$\int \frac{1}{x^5} dx = \int x^{-5} dx = \frac{x^{-5+1}}{-5+1} + C = -\frac{1}{4x^4} + C$

6.3. $\int \frac{1}{x^6} dx = -\frac{1}{5x^5} + C$

$$\int \frac{1}{x^6} dx = \int x^{-6} dx = \frac{x^{-6+1}}{-6+1} + C = -\frac{1}{5x^5} + C$$

6.4. $\int \frac{1}{x^7} dx = -\frac{1}{6x^6} + C$

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7. $\int \frac{1}{x^8} dx = -\frac{1}{7x^7} + C$

$\int \frac{1}{x^8} dx = \int x^{-8} dx = \frac{x^{-8+1}}{-8+1} + C = -\frac{1}{7x^7} + C$

<http://zakon2.rada.gov.ua/laws/show/z0382-15>

$$\int \frac{1}{x^8} dx = -\frac{1}{7x^7} + C$$

http://ukrstat.gov.ua/metod_polog/metod_doc/2018/187/mp_VVP.pdf