

**INTEGRALI (1° foglio).****Data:** \_\_\_\_\_

1. Calcola i seguenti integrali indefiniti:

$$\begin{array}{llll}
 a) \int 5x^6 dx & b) \int \sqrt[5]{x} dx & c) \int \left(-\frac{1}{\sqrt[4]{x}}\right) dx & d) \int \left(-\frac{1}{\sqrt[n]{x}}\right) dx \\
 e) \int \frac{dx}{\sqrt{x}\sqrt{x}} & f) \int \frac{1}{\sqrt{1+x}} dx & g) \int \sqrt{x+a} dx & h) \int \operatorname{tg}^2 x dx \\
 i) \int \frac{x+2}{\sqrt[3]{x^2}} dx & l) \int \frac{1}{\sin^2 x \cos^2 x} dx & m) \int \frac{6-x}{\sqrt{x}} dx & 
 \end{array}$$

2. Calcola i seguenti integrali indefiniti:

$$\begin{array}{llll}
 a) \int \frac{\sqrt{x^3+x}}{\sqrt[5]{x^4}} dx & b) \int \frac{1}{1+x} dx & c) \int \frac{1}{x} \log^2 x dx & d) \int e^x \sin x dx \\
 e) \int \frac{\operatorname{arc} \tan x}{1+x^2} dx & f) \int e^x (x^2-3) dx & g) \int \frac{\sin x}{\cos x+2} dx & h) \int x^2 \log x dx \\
 i) \int \frac{e^x}{e^x+1} dx & l) \int \log \frac{x-1}{x+1} dx & m) \int \frac{1}{(1+x^2) \operatorname{arc} \tan x} dx & n) \int \frac{1}{x-\sqrt{x}} dx
 \end{array}$$

3. Calcola i seguenti integrali:

$$\begin{array}{lll}
 a) \int \frac{2x}{(x-1)(x-2)} dx & b) \int \frac{4}{x^2(x-4)} dx & c) \int \frac{x^3}{x^2-1} dx \\
 d) \int \frac{5}{x^2+x+3} dx & e) \int \frac{4x-3}{x^2+2x+2} dx & 
 \end{array}$$

4. Calcola i seguenti integrali:

$$\begin{array}{ll}
 a) \int \operatorname{tg} x dx & b) \int \frac{\log x}{\sqrt{x}} dx \\
 c) \int \frac{\operatorname{arctan} \sqrt{x}}{\sqrt{x}} dx & d) \int \frac{1}{1-x^2} dx
 \end{array}$$