Primitive

1. $\displaystyle\int \frac{\operatorname{arctg} x}{x^2}\,\mathrm{d}x, \quad x \in (0, \infty);$

2. $\displaystyle\int \frac{x \sin x}{(1 + \cos x)^2}\,\mathrm{d}x, \quad x \in \left(0, \frac{\pi}{2}\right);$

3. $\displaystyle\int \frac{1}{x\sqrt{x^2 - 1}}\,\mathrm{d}x, \quad x \in (-\infty, -1);$

4. $\displaystyle\int \frac{1}{2\sqrt{x - x^2}}\,\mathrm{d}x, \quad x \in (0, 1);$

5. $\displaystyle\int_0^{2\pi} \frac{1}{3 + \cos x}\,\mathrm{d}x;$

6. $\displaystyle\int \frac{1}{x^4 + 1}\,\mathrm{d}x, \quad x \in (0, \infty).$