(а) $$\int \frac{\sqrt{\operatorname{arc\,tg}\, x}}{1+x^2}\,dx = \int \sqrt{\operatorname{arctg}\, x}\, d\operatorname{arctg}\, x = \frac{2}{3}(\operatorname{arctg}\, x)^{\frac{3}{2}} + C$$

(б) $$\int \frac{e^x\,dx}{e^{2x}+1} = \int \frac{de^x}{(e^x)^2+1} = \operatorname{arctg}\, e^x + C;$$

(в) $$\int \operatorname{tg}\frac{1}{x}\cdot\frac{dx}{x^2} = -\int \operatorname{tg}\frac{1}{x}\,d\frac{1}{x} = \ln\left|\cos\frac{1}{x}\right| + C$$