Supplement. trig. subst. homework problems (taken from §7.4 of Taylor)

① $\int \frac{dy}{\sqrt{9+y^2}}$

② $\int \sqrt{25-t^2}\, dt$

③ $\int \frac{dx}{\sqrt{4x^2-49}}$

④ $\int \frac{\sqrt{9-w^2}}{w^2}\, dw$

⑤ $\int \frac{8\,dx}{(4x^2+1)^2}$

⑥ $\int \frac{2\,dx}{x^3\sqrt{x^2-1}}$

⑦ $\int \frac{x^2\,dx}{(x^2-1)^{5/2}}$

⑧ $\int \frac{2\,dx}{x^2\sqrt{x^2+1}}$