Improper Integrals

$$\int_0^3 \frac{dx}{\sqrt{9 - x^2}}$$

$$\int_0^2 \frac{dx}{2 - x}$$

$$\int_0^4 \frac{dx}{\sqrt[3]{x - 1}}$$

$$\int_0^{\frac{\pi}{2}} \frac{\cos x}{\sqrt{1-\sin x}}\,dx$$

$$\int_1^{\infty} \frac{dx}{x^2}$$

$$\int_{-\infty}^{0} e^{3x}\,dx$$

Find the area between the curve $y^2 = \dfrac{x^2}{1 - x^2}$ and its asymptotes $(y > 0)$.