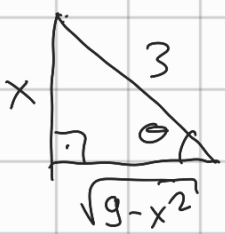
$$I=\int \frac{x^2}{(9-x^2)^{3/2}}\,dx \qquad x=3\sin\theta \Rightarrow dx=3\cos\theta\,d\theta$$

Then,

$$I=\int \frac{9\sin^2\theta\cdot 3\cos\theta\,d\theta}{(9-9\sin^2\theta)^{3/2}}=\int \frac{27\sin^2\theta\cos\theta\,d\theta}{3^3\cos^3\theta}=$$

$$\underbrace{(9-9\sin^2\theta)}_{9\cos^2\theta}$$

$$=\int \frac{\sin^2\theta}{\cos^2\theta}\,d\theta=\int(\tan^2\theta+1-1)\,d\theta=\tan\theta-\theta+C=$$



$$\sin\theta=\frac{x}{3}\Rightarrow\theta=\arcsin\left(\frac{x}{3}\right)$$

$$\tan\theta=\frac{x}{\sqrt{9-x^2}}$$

$$=\frac{x}{\sqrt{9-x^2}}-\arcsin\left(\frac{x}{3}\right)+C$$