Hi

$$A = \int \frac{xdx}{\sqrt{a^2 - x^4}} \tag{1}$$

Zamena peremennoi: t=x^2; Togda:

$$A = 0.5 \int \frac{dt}{\sqrt{a^2 - t^2}} \tag{2}$$

Novaya zamena: sin(u) = t/a
Togda:

$$dt = a \cdot cos(u) \cdot du \tag{3}$$

$$\frac{1}{\sqrt{a^2 - t^2}} = \frac{1}{a\sqrt{1 - (t/a)^2}} = \frac{1}{a \cdot cos(u)} \tag{4}$$

Poetomu:

$$A = 0.5 \int \frac{dt}{\sqrt{a^2 - t^2}} == 0.5 \int \frac{a \cdot cos(u) \cdot du}{a \cdot cos(u)} == 1/2 \int du = u/2 + Const \tag{5}$$

Teper:

$$sin(u) = t/a \rightarrow u = arcsin(t/a) = arcsin(x^2/a) \tag{6}$$

Otvet:

$$A = 0.5 \cdot arcsin(x^2/a) + Const \tag{7}$$

Const nahoditsya iz nachalnyh uslovii