! For an efficient use of these tables, first read `HowTo.pdf`.

T2.16A. Integrands of the form $\dfrac{1}{(\pm p \mp x^2)^2\,\sqrt{(a^2 \pm x^2)\,(b^2 \pm x^2)}}$ on the intervals (y, a) and (a, y).

Notation used: $\lambda = \arcsin\sqrt{\dfrac{a^2-y^2}{a^2-b^2}}$, $\mu = \arcsin\sqrt{\dfrac{y^2-a^2}{y^2-b^2}}$,

$$q = \frac{\sqrt{a^2-b^2}}{a}, \quad t = \frac{b}{a}.$$

1. $$\int_y^a \frac{dx}{(x^2-p)\sqrt{(a^2-x^2)(x^2-b^2)}} = \frac{1}{a(a^2-p)}\Pi\left(\lambda,\, \frac{a^2-b^2}{a^2-p},\, q\right), \quad a > y \geq b > 0; \;\; p \neq a^2.$$

2. $$\int_a^y \frac{dx}{(p-x^2)\sqrt{(x^2-a^2)(x^2-b^2)}} = \frac{1}{a(p-a^2)(p-b^2)}\left\{(a^2-b^2)\Pi\left(\mu,\, \frac{p-b^2}{p-a^2},\, t\right) + \left(p-a^2\right) F\left(\mu,\, t\right)\right\},$$
$$y > a > b > 0,\; p \neq a^2,\; p \neq b^2.$$