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

T2.07A. Integrands of the form $\dfrac{1}{\sqrt{x(1-x)(a+bx)}}$ and $\dfrac{1}{\sqrt{(x-a)\,(x^2-2bx+c^2)}}$ on the intervals $(0,y)$, $(y,1)$, (y,a), and (a,y).

1. $$\int_0^y \frac{dx}{\sqrt{x(1-x)(1-k^2x)}} = 2F(\arcsin\sqrt{y},\,k), \quad 0<y<1.$$

2. $$\int_y^1 \frac{dx}{\sqrt{x(1-x)(k'^2+k^2x)}} = 2F(\arccos\sqrt{y},\,k), \quad 0<y<1.$$

3. $$\int_y^1 \frac{dx}{\sqrt{x(1-x)(x-k'^2)}} = 2F\left(\arcsin\frac{\sqrt{1-y}}{k},\,k\right), \quad 0<y<1.$$

4. $$\int_0^y \frac{dx}{\sqrt{x(1+x)(1+k'^2x)}} = 2F(\arctan\sqrt{y},\,k), \quad 0<y<1.$$

5. $$\int_0^y \frac{dx}{\sqrt{x[1+x^2+2(k'^2-k^2)x]}} = F(2\arctan\sqrt{y},\,k), \quad 0<y<1.$$

6. $$\int_y^1 \frac{dx}{\sqrt{x[k'^2(1+x^2)+2(1+k^2)x]}} = F\left(\frac{\pi}{2}-2\arctan\sqrt{y},\,k\right), \quad 0<y<1.$$

7. $$\int_a^y \frac{dx}{\sqrt{(x-a)\,(x^2-2bx+c^2)}} = \frac{1}{\sqrt{p}}\,F\left(2\arctan\sqrt{\frac{y-a}{p}},\,\sqrt{\frac{p+b-a}{2p}}\right), \quad a<y,$$
   where $p=\sqrt{a^2-2ab+c^2}$.

8. $$\int_y^a \frac{dx}{\sqrt{(a-x)\,(x^2-2bx+c^2)}} = \frac{1}{\sqrt{p}}\,F\left(2\,\arctan\sqrt{\frac{a-y}{p}},\,\sqrt{\frac{p-b+a}{2p}}\right),\quad y<a,$$

where $p=\sqrt{a^2-2ab+c^2}$.