

$$\begin{aligned}
\therefore \int \frac{dx}{(1+x)\sqrt{1-x-x^2}} &= - \int \frac{dz}{z^2 \frac{1}{z} \sqrt{1 + \frac{1}{z} - \frac{1}{z^2}}} \\
&= - \int \frac{dz}{\sqrt{z^2 + z - 1}} = - \int \frac{dz}{\sqrt{\left(z + \frac{1}{2}\right)^2 - \frac{5}{4}}} \\
&= - \log \left\{ \sqrt{z^2 + z - 1} + z + \frac{1}{2} \right\} \\
&= - \log \left\{ \frac{\sqrt{1-x-x^2}}{1+x} + \frac{1}{1+x} + \frac{1}{2} \right\} \\
&= - \log \left\{ \frac{2\sqrt{1-x-x^2} + x + 3}{2(1+x)} \right\} \\
&= \log \left\{ \frac{2(1+x)}{2\sqrt{1-x-x^2} + x + 3} \right\} \\
&= \log \left\{ \frac{2(1+x)(x+3) - 2\sqrt{1-x-x^2}}{x^2 + 6x + 9 - 4 + 4x + 4x^2} \right\} \\
&= \log \frac{2(1+x)(x+3 - 2\sqrt{1-x-x^2})}{5(1+x)^2} \\
&= \log \frac{x+3 - 2\sqrt{1-x-x^2}}{1+x} + c.
\end{aligned}$$

$$\begin{aligned}
(36.) \quad \int \frac{dx}{\sqrt{1+2x-x^2}} &= \int \frac{dx}{\sqrt{2-(1-x)^2}} \\
&= - \int \frac{d(1-x)}{\sqrt{2-(1-x)^2}} = \cos^{-1} \frac{1-x}{\sqrt{2}}.
\end{aligned}$$