

$$\begin{aligned}
& 2[\operatorname{artanh}(2v) - \operatorname{artanh}(v)] \\
& \operatorname{arsinh} \frac{4v}{1-4v^2} - \operatorname{arsinh} \frac{2v}{1-v^2} \\
& \ln \frac{1+2v}{1-2v} + \ln \frac{1-v}{1+v} \\
& \ln \frac{1+v-2v^2}{1-v-2v^2} \\
& \ln \left[\frac{4v}{1-4v^2} + \sqrt{\left(\frac{4v}{1-4v^2}\right)^2 + 1} \right] - \ln \left[\frac{2v}{1-v^2} + \sqrt{\left(\frac{2v}{1-v^2}\right)^2 + 1} \right] \\
& \operatorname{arcosh} \frac{1+4v^2}{1-4v^2} - \operatorname{arcosh} \frac{1+v^2}{1-v^2} \\
& \operatorname{artanh} \left[1 + \left(\frac{1-4v^2}{4v}\right)^2 \right]^{-1/2} - \operatorname{artanh} \left[1 + \left(\frac{1-v^2}{2v}\right)^2 \right]^{-1/2} \\
& \frac{c}{g} \ln \left(\frac{\sqrt{c^2 + g^2 \left(\frac{4v}{g(1-4\frac{v^2}{c^2})}\right)^2} + g \frac{4v}{g(1-4\frac{v^2}{c^2})}}{\sqrt{c^2 + g^2 \left(\frac{2v}{g(1-\frac{v^2}{c^2})}\right)^2} + g \frac{2v}{g(1-\frac{v^2}{c^2})}} \right)
\end{aligned}$$