$$\begin{aligned} & u_{(*)} > 22 := a * Exp[-I * c1 * t] + b \\ & u_{(*)} = 23 := r * Exp[-I * c1 * t] + g \\ & u_{(*)} = 220 := A * Exp[I * c1 * t] + B \\ & u_{(*)} = 230 := R * Exp[I * c1 * t] + G \\ & u_{(*)} = 23 \\ & u_{(*)} = g + e^{-i c1 t} r \end{aligned}$$

$$u_{(*)} = p22 := k1 * Exp[-I * c1 * t/2] + I * a * c1 * Exp[-I * c1 * t] + I * b * c1 \\ & u_{(*)} = p23 := k2 * Exp[-I * c1 * t/2] + I * r * c1 * Exp[-I * c1 * t] + I * g * c1 \\ & u_{(*)} = p22 := K1 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * B * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * B * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * A * c1 * Exp[I * c1 * t] - I * G * c1 \\ & u_{(*)} = p23 := K2 * Exp[I * c1 * t/2] - I * G * c1 * G * G * G * G * G * G * G * G * G *$$

 $\dot{\mathbb{E}} \, e^{i\,cl\,t} \, \left(A\,\, b + g\,\, R \right) \, + \, \frac{e^{\frac{i\,cl\,t}{2}} \, \left(A\,\, k1 - b\,\, K1 - g\,\, K2 + k2\,\, R \right)}{2\,\,cl} \, + \, 2\,\,c0\,\,t - cl\,\, \left(a\,\, A + b\,\, B + g\,\, G + r\,\, R \right) \,\,t$

$$\begin{split} & \ln(\text{@}) := \text{ Expand} \Big[\text{constant} - \text{i} \, \text{e}^{-\text{i} \, \text{cl} \, \text{t}} \, \left(\text{a} \, \text{B} + \text{G} \, \text{r} \right) - \frac{1}{2 \, \text{cl}} \text{e}^{-\frac{1}{2} \, \text{i} \, \text{cl} \, \text{t}} \, \left(\text{B} \, \text{k1} - \text{a} \, \text{K1} + \text{G} \, \text{k2} - \text{K2} \, \text{r} \right) + \\ & \quad \text{i} \, \text{e}^{\text{i} \, \text{cl} \, \text{t}} \, \left(\text{A} \, \text{b} + \text{g} \, \text{R} \right) + \frac{\text{e}^{\frac{\text{i} \, \text{cl} \, \text{t}}{2}} \, \left(\text{A} \, \text{k1} - \text{b} \, \text{K1} - \text{g} \, \text{K2} + \text{k2} \, \text{R} \right)}{2 \, \text{c1}} + 2 \, \text{c0} \, \text{t} - \text{c1} \, \left(\text{a} \, \text{A} + \text{b} \, \text{B} + \text{g} \, \text{G} + \text{r} \, \text{R} \right) \, \text{t} \Big] \\ & \quad \text{Out} [\text{@}] := \text{constant} - \text{i} \, \text{a} \, \text{B} \, \text{e}^{-\text{i} \, \text{cl} \, \text{t}} + \text{i} \, \text{A} \, \text{b} \, \text{e}^{\text{i} \, \text{cl} \, \text{t}} - \frac{\text{B} \, \text{e}^{-\frac{1}{2} \, \text{i} \, \text{cl} \, \text{t}}{\text{k1}} + \frac{\text{A} \, \text{e}^{\frac{\text{i} \, \text{cl} \, \text{t}}}{\text{cl}} \, \text{k1}}{2 \, \text{c1}} + \frac{\text{A} \, \text{e}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{t}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{cl} \, \text{c}}}}{2 \, \text{c1}} + \frac{\text{A} \, \text{c}^{\frac{\text{i} \, \text{c}}}}{2 \,$$

$$\frac{a \, e^{-\frac{1}{2} \, i \, c1 \, t} \, K1}{2 \, c1} - \frac{b \, e^{\frac{i \, c1 \, t}{2}} \, K1}{2 \, c1} - \frac{e^{-\frac{1}{2} \, i \, c1 \, t} \, G \, K2}{2 \, c1} - \frac{e^{\frac{i \, c1 \, t}{2}} \, g \, K2}{2 \, c1} - \frac{e^{\frac{i \, c1 \, t}{2}} \, g \, K2}{2 \, c1} - \frac{e^{-\frac{1}{2} \, i \, c1 \, t} \, G \, r + \frac{e^{-\frac{1}{2} \, i \, c1 \, t} \, K2 \, r}{2 \, c1} + \frac{e^{-\frac{1}{2} \, i \, c1 \, t} \, K2 \, r}{2 \, c1} + \frac{e^{\frac{i \, c1 \, t}{2}} \, k2 \, R}{2 \, c1} + 2 \, c0 \, t - a \, A \, c1 \, t - b \, B \, c1 \, t - c1 \, g \, G \, t - c1 \, r \, R \, t$$

$$\begin{split} & \ln[e]:= \text{ y1 := constant} - \text{i} \text{ a B } \text{e}^{-\text{i} \text{ c1} \text{ t}} + \text{i} \text{ A b } \text{e}^{\text{i} \text{ c1} \text{ t}} - \frac{\text{B } \text{e}^{-\frac{1}{2} \text{ i} \text{ c1} \text{ t}} \text{ k1}}{2 \text{ c1}} + \frac{\text{A } \text{e}^{\frac{\text{i} \text{ c1} \text{ t}}{2}} \text{ k1}}{2 \text{ c1}} + \\ & \frac{\text{a } \text{e}^{-\frac{1}{2} \text{ i} \text{ c1} \text{ t}} \text{ K1}}{2 \text{ c1}} - \frac{\text{b } \text{e}^{\frac{\text{i} \text{ c1} \text{ t}}{2}} \text{ K1}}{2 \text{ c1}} - \frac{\text{e}^{-\frac{1}{2} \text{ i} \text{ c1} \text{ t}} \text{ G } \text{ k2}}{2 \text{ c1}} - \frac{\text{e}^{\frac{\text{i} \text{ c1} \text{ t}}{2}} \text{ g K2}}{2 \text{ c1}} - \text{i} \text{ e}^{-\text{i} \text{ c1} \text{ t}} \text{ G } \text{ r} + \frac{\text{e}^{-\frac{1}{2} \text{ i} \text{ c1} \text{ t}} \text{ K2 } \text{ r}}{2 \text{ c1}} + \\ & \text{i} \text{ e}^{\text{i} \text{ c1} \text{ t}} \text{ g R} + \frac{\text{e}^{\frac{\text{i} \text{ c1} \text{ t}}{2}} \text{ k2 R}}{2 \text{ c1}} + 2 \text{ c0 t} - \text{a A c1 t} - \text{b B c1 t} - \text{c1 g G t} - \text{c1 r R t} \end{split}$$

In[•]:= **y1**

$$\begin{aligned} & \textit{Out}[*] = \; \text{constant} - \text{$\dot{\mathbb{I}}$ a B $e^{-i \, cl \, t}$} + \text{$\dot{\mathbb{I}}$ A b $e^{i \, cl \, t}$} - \frac{\text{B} \, e^{-\frac{1}{2} \, i \, cl \, t} \, \text{k1}}{2 \, cl} + \frac{\text{A} \, e^{\frac{i \, cl \, t}{2}} \, \text{k1}}{2 \, cl} + \\ & \frac{\text{a} \, e^{-\frac{1}{2} \, i \, cl \, t} \, \text{K1}}{2 \, cl} - \frac{\text{b} \, e^{\frac{i \, cl \, t}{2}} \, \text{K1}}{2 \, cl} - \frac{\text{e}^{-\frac{1}{2} \, i \, cl \, t} \, \text{G } \, \text{k2}}{2 \, cl} - \frac{\text{e}^{\frac{i \, cl \, t}{2}} \, \text{g K2}}{2 \, cl} - \text{i} \, e^{-i \, cl \, t} \, \text{G } \, \text{r} + \frac{\text{e}^{-\frac{1}{2} \, i \, cl \, t} \, \text{K2} \, \text{r}}{2 \, cl} + \\ & \text{i} \, e^{i \, cl \, t} \, \text{g R} + \frac{\text{e}^{\frac{i \, cl \, t}{2}} \, \text{k2} \, \text{R}}{2 \, cl} + 2 \, \text{c0} \, \text{t} - \text{a A} \, \text{cl} \, \text{t} - \text{b B} \, \text{cl} \, \text{t} - \text{cl} \, \text{g G} \, \text{t} - \text{cl} \, \text{r} \, \text{R} \, \text{t} \end{aligned}$$