

$$\frac{1}{\text{Log}[\gamma]^2}$$

$$\sigma^4 \left(\theta^2 + \frac{1}{(2a + \text{Log}[\gamma])^2} - \frac{1}{2a^2 (-1 + e^{2ah})^2 (1 + e^{2ah}) (h - T) \text{Log}[\gamma]^2} \alpha \theta \sigma^4 (e^{-2a(h+T)} (1 - e^{2ah}) \right. \\
\theta (4a^2 e^{2a(h+T)} (-1 + e^{4ah}) (h - T) (-1 + \gamma^h) + 2a e^{2aT} (1 + e^{2ah}) (e^{2a(h+T)} h \gamma^h + e^{2aT} h \\
(-2 + \gamma^h) + e^{4ah} (h(-2 + \gamma^h) - 2T(-1 + \gamma^h)) + e^{2ah} (h(4 - 3\gamma^h) + 2T(-1 + \gamma^h))) \\
\text{Log}[\gamma] + e^{2a(-h+T)} (3e^{4aT} h + 5e^{2a(3h+T)} h \gamma^h - 3e^{2a(h+2T)} h \gamma^h + 2e^{10ah} (h - T) \gamma^h + \\
e^{2a(h+T)} h(-6 + \gamma^h) - e^{4ah} (2h - T) (-3 + \gamma^h) + 6e^{2a(2h+T)} h(-1 + \gamma^h) - \\
e^{8ah} (3h - 3T + (4h + T) \gamma^h) + e^{6ah} (2T \gamma^h + h(6 - 5\gamma^h))) \text{Log}[\gamma]^2 - \\
h \text{Log}[\gamma] (3(-1 + e^{2ah}) (-1 + e^{4a(-h+T)}) h \text{Log}[\gamma] - 2(-1 + e^{4ah}) (-1 + e^{2a(-h+T)}) \\
h(a + 3 \text{Log}[\gamma]) - (-1 + e^{2ah})^2 (1 + e^{2ah}) (h - T) (2a + 3 \text{Log}[\gamma])) - \\
\left. (\alpha^2 \sigma^8 (e^{-4a(2h+T)} (-1 + e^{2ah}) (1 + e^{2ah}) h^3 \text{Log}[\gamma]^2 \right. \\
(-4a^2 (2T (4e^{8a(h+T)} h - 4e^{8a(2h+T)} h + e^{4a(h+2T)} h - 19e^{14ah+4aT} h + 19e^{22ah+4aT} h + \\
3e^{6ah+8aT} h + 3e^{10ah+8aT} h - 3e^{14ah+8aT} h - 3e^{18ah+8aT} h - e^{20ah+8aT} h + \\
e^{18ah+4aT} (9h - 6T) - 4e^{8ah+6aT} (h - 2T) - 4e^{6a(h+T)} (h - T) + 12e^{16ah+6aT} \\
(h - T) + 12e^{14ah+6aT} (2h - T) + 4e^{6a(2h+T)} (5h - T) + 4e^{4a(5h+T)} (5h - \\
T) + 4e^{20ah+6aT} (-5h + T) + e^{4a(2h+T)} (-2h + T) + e^{4a(7h+T)} (-h + T) - \\
4e^{6a(3h+T)} (2h + T) - 4e^{4a(4h+T)} (2h + T) + 4e^{10ah+6aT} (2h + T) + \\
e^{4a(3h+T)} (-19h + 3T) + e^{10ah+4aT} (-10h + 3T) + e^{26ah+4aT} (h + 3T) + \\
e^{4a(6h+T)} (10h + 3T) + e^{6a(4h+T)} (-8h + 4T) + e^{22ah+6aT} (-20h + 8T)) + \\
B (4e^{8a(h+T)} h^2 - 4e^{8a(2h+T)} h^2 + e^{4a(h+2T)} h^2 + 3e^{6ah+8aT} h^2 + \\
3e^{10ah+8aT} h^2 - 3e^{14ah+8aT} h^2 - 3e^{18ah+8aT} h^2 - e^{20ah+8aT} h^2 - \\
2e^{22ah+6aT} h(h - 2T) - 3e^{18ah+4aT} h(3h - 2T) - 2e^{8ah+6aT} h(5h - 2T) - \\
2e^{6a(4h+T)} h(h - T) + 6e^{14ah+6aT} h(h - T) - e^{4a(7h+T)} (h - T)^2 - \\
2e^{6a(h+T)} h(2h - T) + 6e^{16ah+6aT} h(2h - T) + 2e^{6a(3h+T)} h(5h - T) - \\
2e^{10ah+6aT} h(5h - T) + e^{4a(2h+T)} (-2h + T)^2 - 2e^{6a(2h+T)} h(2h + T) + \\
2e^{20ah+6aT} h(2h + T) + e^{26ah+4aT} (h^2 - T^2) + e^{4a(3h+T)} (5h^2 - T^2) - \\
2e^{4a(5h+T)} (2h^2 + hT - T^2) + e^{4a(6h+T)} (4h^2 - 6hT + T^2) + \\
e^{10ah+4aT} (8h^2 - 6hT + T^2) - 2e^{4a(4h+T)} (4h^2 - 5hT + T^2) - \\
e^{14ah+4aT} (h^2 - 6hT + 2T^2) + e^{22ah+4aT} (h^2 - 6hT + 2T^2)) - \\
12a (4T (6e^{8a(h+T)} h + e^{10a(h+T)} h - 6e^{8a(2h+T)} h - e^{2a(h+5T)} h + 2e^{2a(6h+5T)} h + \\
2e^{2a(7h+5T)} h + e^{2a(8h+5T)} h - 21e^{14ah+4aT} h + 21e^{22ah+4aT} h - \\
2e^{4ah+10aT} h - 2e^{6ah+10aT} h - e^{8ah+10aT} h + e^{16ah+6aT} (16h - 15T) + \\
e^{14ah+6aT} (29h - 15T) + e^{18ah+4aT} (9h - 6T) + e^{6a(2h+T)} (23h - 5T) + \\
e^{4a(5h+T)} (21h - 4T) + e^{4a(h+2T)} (4h - 2T) + e^{6ah+8aT} (8h - 2T) - \\
5e^{6a(h+T)} (h - T) + 2e^{20ah+8aT} (h - T) + e^{4a(2h+T)} (-2h + T) + 5e^{6a(4h+T)} \\
(-2h + T) + e^{4a(7h+T)} (-h + T) + 2e^{10ah+8aT} (h + T) - 2e^{18ah+8aT} (h + T) + \\
e^{14ah+8aT} (-8h + 2T) + e^{4a(3h+T)} (-20h + 3T) + e^{10ah+4aT} (-11h + 3T) + \\
e^{26ah+4aT} (2h + 3T) + e^{4a(6h+T)} (11h + 3T) + e^{12ah+8aT} (-6h + 4T) - \\
e^{4a(4h+T)} (9h + 4T) + e^{20ah+6aT} (-23h + 5T) - e^{6a(3h+T)} (8h + 5T) + \\
e^{10ah+6aT} (8h + 5T) + e^{22ah+6aT} (-24h + 10T) + e^{8ah+6aT} (-6h + 10T)) +$$

$$\begin{aligned}
& B \left(10 e^{8a(h+T)} h^2 + e^{10a(h+T)} h^2 - 10 e^{8a(2h+T)} h^2 - e^{2a(h+5T)} h^2 + 2 e^{2a(6h+5T)} h^2 + \right. \\
& 2 e^{2a(7h+5T)} h^2 + e^{2a(8h+5T)} h^2 - 2 e^{4a(h+10aT)} h^2 - 2 e^{6a(h+10aT)} h^2 - \\
& e^{8a(h+10aT)} h^2 + e^{14a(h+6aT)} h(8h-9T) + e^{16a(h+6aT)} h(19h-9T) - \\
& 2 e^{22a(h+6aT)} h(h-3T) - 2 e^{8a(h+6aT)} h(8h-3T) + e^{6a(3h+T)} h(17h-3T) - \\
& e^{10a(h+6aT)} h(17h-3T) - 4 e^{18a(h+4aT)} h(3h-2T) - e^{12a(h+8aT)} h(3h-2T) - \\
& 3 e^{6a(4h+T)} h(h-T) - e^{4a(7h+T)} (h-T)^2 - 3 e^{6a(h+T)} h(2h-T) + \\
& e^{4a(h+2T)} h(4h-T) + e^{6a(h+8aT)} h(9h-T) + e^{14a(h+8aT)} h(-9h+T) + \\
& e^{4a(2h+T)} (-2h+T)^2 - e^{20a(h+8aT)} h(h+T) + e^{10a(h+8aT)} h(6h+T) - \\
& e^{18a(h+8aT)} h(6h+T) - e^{6a(2h+T)} h(8h+3T) + e^{20a(h+6aT)} h(8h+3T) - \\
& e^{4a(5h+T)} (7h^2 + hT - 2T^2) + e^{14a(h+4aT)} (h^2 + 6hT - 2T^2) - \\
& e^{22a(h+4aT)} (h^2 + 6hT - 2T^2) + e^{4a(4h+T)} (-8h^2 + 11hT - 2T^2) + \\
& e^{26a(h+4aT)} (2h^2 - hT - T^2) + e^{4a(3h+T)} (8h^2 - hT - T^2) + \\
& e^{4a(6h+T)} (4h^2 - 7hT + T^2) + e^{10a(h+4aT)} (10h^2 - 7hT + T^2) \left. \right) \text{Log}[\gamma] + \\
& 3 \left(-16T \left(2 e^{12aT} h + 12 e^{8a(h+T)} h + 8 e^{10a(h+T)} h - 2 e^{12a(h+T)} h - \right. \right. \\
& 12 e^{8a(2h+T)} h + 2 e^{4a(h+3T)} h - 8 e^{2a(h+5T)} h + 21 e^{2a(6h+5T)} h + \\
& 21 e^{2a(7h+5T)} h + 8 e^{2a(8h+5T)} h + 2 e^{2a(h+6T)} h - 2 e^{2a(5h+6T)} h - \\
& 42 e^{14a(h+4aT)} h + 42 e^{22a(h+4aT)} h - 21 e^{4a(h+10aT)} h - 21 e^{6a(h+10aT)} h - \\
& 8 e^{8a(h+10aT)} h - 2 e^{8a(h+12aT)} h + 3 e^{16a(h+6aT)} (8h-9T) + \\
& 3 e^{14a(h+6aT)} (19h-9T) + e^{6a(2h+T)} (53h-9T) + 3 e^{18a(h+8aT)} (3h-5T) + \\
& 3 e^{4a(h+2T)} (7h-5T) + 3 e^{20a(h+8aT)} (8h-5T) + 3 e^{6a(h+8aT)} (12h-5T) + \\
& 5 e^{18a(h+4aT)} (3h-2T) - 2 e^{4a(7h+T)} (h-T) + 7 e^{4a(5h+T)} (5h-T) - \\
& 7 e^{4a(4h+T)} (2h+T) + e^{4a(2h+T)} (-4h+2T) + e^{4a(3h+T)} (-33h+5T) + \\
& e^{10a(h+4aT)} (-21h+5T) + e^{26a(h+4aT)} (6h+5T) + e^{4a(6h+T)} (18h+5T) + \\
& e^{20a(h+6aT)} (-53h+9T) + e^{6a(4h+T)} (-20h+9T) + e^{6a(h+T)} (-7h+9T) - \\
& e^{6a(3h+T)} (26h+9T) + e^{10a(h+6aT)} (26h+9T) + e^{14a(h+8aT)} (-36h+15T) + \\
& e^{10a(h+8aT)} (-9h+15T) + e^{22a(h+6aT)} (-50h+18T) + e^{8a(h+6aT)} (-4h+18T) + \\
& e^{12a(h+8aT)} (-45h+30T) \left. \right) + 3B \left(-e^{12aT} h^2 - 22 e^{8a(h+T)} h^2 - 4 e^{10a(h+T)} h^2 + \right. \\
& e^{12a(h+T)} h^2 + 22 e^{8a(2h+T)} h^2 - e^{4a(h+3T)} h^2 + 4 e^{2a(h+5T)} h^2 - \\
& 8 e^{2a(6h+5T)} h^2 - 8 e^{2a(7h+5T)} h^2 - 4 e^{2a(8h+5T)} h^2 - e^{2a(h+6T)} h^2 + \\
& e^{2a(5h+6T)} h^2 + 8 e^{4a(h+10aT)} h^2 + 8 e^{6a(h+10aT)} h^2 + 4 e^{8a(h+10aT)} h^2 + \\
& e^{8a(h+12aT)} h^2 - 4 e^{14a(h+6aT)} h(2h-3T) - 4 e^{16a(h+6aT)} h(7h-3T) + \\
& 5 e^{18a(h+4aT)} h(3h-2T) + 2 e^{12a(h+8aT)} h(3h-2T) + 4 e^{6a(4h+T)} h(h-T) + \\
& e^{4a(7h+T)} (h-T)^2 + 4 e^{6a(h+T)} h(2h-T) + 8 e^{8a(h+6aT)} h(3h-T) - \\
& 2 e^{4a(h+2T)} h(4h-T) - 4 e^{6a(3h+T)} h(7h-T) + 4 e^{10a(h+6aT)} h(7h-T) - \\
& 2 e^{6a(h+8aT)} h(10h-T) + 2 e^{14a(h+8aT)} h(10h-T) - 8 e^{22a(h+6aT)} hT - \\
& e^{4a(2h+T)} (-2h+T)^2 + 2 e^{20a(h+8aT)} h(h+T) + 4 e^{6a(2h+T)} h(4h+T) - \\
& 4 e^{20a(h+6aT)} h(4h+T) - 2 e^{10a(h+8aT)} h(7h+T) + 2 e^{18a(h+8aT)} h(7h+T) + \\
& e^{4a(5h+T)} (11h^2 - 2T^2) + e^{22a(h+4aT)} (4h^2 + 6hT - 2T^2) - \\
& e^{4a(6h+T)} (3h^2 - 8hT + T^2) - e^{10a(h+4aT)} (12h^2 - 8hT + T^2) + \\
& e^{4a(3h+T)} (-12h^2 + 2hT + T^2) + e^{26a(h+4aT)} (-3h^2 + 2hT + T^2) + \\
& e^{4a(4h+T)} (7h^2 - 12hT + 2T^2) + e^{14a(h+4aT)} (-4h^2 - 6hT + 2T^2) \left. \right) \text{Log}[\gamma]^2 - \\
& 2 e^{2a(h-4T)} (1 - e^{2ah}) (1 + e^{2ah}) (1 - e^{4ah}) h^2 \theta \text{Log}[\gamma]
\end{aligned}$$

$$\begin{aligned}
& (8 a^3 B e^{-4 a h+8 a T} (1+e^{2 a h})^2 (-1-e^{4 a h}+e^{6 a h}+e^{10 a h}) \\
& (h-T) (e^{2 a T} h+e^{4 a h} (h-T)+e^{2 a h} (-2 h+T)) (-1+\gamma^h) + \\
& 4 a^2 (B (e^{8 a h+12 a T} h^2 \gamma^h+e^{2 a (6 h+5 T)} h (h-T) \gamma^h+e^{12 a T} h^2 (-12+11 \gamma^h) + \\
& e^{6 a (h+2 T)} h (h-3 T+(h+3 T) \gamma^h)+2 e^{4 a h+10 a T} h (5 (h+T)-(7 h+4 T) \gamma^h) + \\
& e^{10 a h+8 a T} h (h (15-13 \gamma^h)+17 T (-1+\gamma^h)) + \\
& e^{4 a (h+2 T)} (-h T \gamma^h+17 h^2 (-1+\gamma^h)-5 T^2 (-1+\gamma^h)) + \\
& e^{12 a h+8 a T} (h T \gamma^h-5 h^2 (-1+\gamma^h)+5 T^2 (-1+\gamma^h)) + \\
& e^{6 a h+10 a T} h (T (20-19 \gamma^h)+h (-8+3 \gamma^h))+4 e^{8 a h+10 a T} h (-5 T (-1+\gamma^h) + \\
& h (-4+3 \gamma^h))+e^{14 a h+8 a T} (h-T) (-5 T (-1+\gamma^h)+h (-5+4 \gamma^h)) + \\
& e^{-6 a (h-2 T)} h (-3 T (-1+\gamma^h)+h (-5+4 \gamma^h))+e^{4 a (h+3 T)} h (3 T (-1+\gamma^h) + \\
& h (-3+5 \gamma^h))+e^{-2 a h+8 a T} (2 h-T) (-5 T (-1+\gamma^h)+h (-7+6 \gamma^h)) + \\
& e^{-4 a (h-3 T)} h (-3 T (-1+\gamma^h)+h (-9+7 \gamma^h))+e^{2 a (h+6 T)} h (3 T (-1+\gamma^h) + \\
& h (-7+8 \gamma^h))+e^{10 a (h+T)} h (T (10-11 \gamma^h)+h (-10+9 \gamma^h)) - \\
& 4 e^{10 a T} h (-5 T (-1+\gamma^h)+h (-10+9 \gamma^h))+e^{-4 a h+10 a T} h (h (14-11 \gamma^h) + \\
& T (-10+9 \gamma^h))+e^{-2 a (h-6 T)} h (-3 T (-1+\gamma^h)+h (-13+11 \gamma^h)) + \\
& e^{2 a (h+5 T)} h (h (34-33 \gamma^h)+T (-10+11 \gamma^h))+e^{-2 a (h-5 T)} h (h (32-27 \gamma^h) + \\
& T (-20+19 \gamma^h))+e^{2 a (h+4 T)} h (-17 T (-1+\gamma^h)+h (-27+25 \gamma^h)) + \\
& e^{6 a h+8 a T} (h^2 (7-4 \gamma^h)-10 T^2 (-1+\gamma^h)+h T (-27+25 \gamma^h)) - \\
& e^{8 a T} (h^2 (28-25 \gamma^h)-5 T^2 (-1+\gamma^h)+h T (-27+26 \gamma^h)) + \\
& e^{8 a (h+T)} (h^2 (16-13 \gamma^h)-5 T^2 (-1+\gamma^h)+h T (-27+26 \gamma^h))) + \\
& 2 T (e^{8 a h+12 a T} h \gamma^h+e^{2 a (6 h+5 T)} (3 h-2 T) \gamma^h+e^{6 a h+8 a T} h (58-57 \gamma^h) + \\
& e^{-6 a (h-2 T)} h (-2+\gamma^h)+8 e^{8 a h+10 a T} (5 h-2 T) (-1+\gamma^h) - \\
& 2 e^{-2 a h+8 a T} (2 h-T) (-1+\gamma^h)+8 e^{10 a T} (h+2 T) (-1+\gamma^h) + \\
& 2 e^{-4 a (h-3 T)} h (-3+2 \gamma^h)+2 e^{6 a (h+2 T)} h (-1+2 \gamma^h) + \\
& 2 e^{-2 a (h-6 T)} h (-5+4 \gamma^h)+2 e^{4 a (h+3 T)} h (-3+4 \gamma^h)+e^{12 a T} h (-12+11 \gamma^h) + \\
& e^{2 a (h+6 T)} h (-10+11 \gamma^h)+e^{-4 a h+10 a T} (8 h-8 T-5 h \gamma^h+6 T \gamma^h) + \\
& 2 e^{10 a h+8 a T} (9 h+4 T-2 (5 h+2 T) \gamma^h)+2 e^{12 a h+8 a T} \\
& (h+3 T-(2 h+3 T) \gamma^h)+e^{8 a (h+T)} (40 h+6 T-(41 h+6 T) \gamma^h)+e^{14 a h+8 a T} \\
& (h (-2+\gamma^h)-2 T (-1+\gamma^h))+2 e^{2 a (h+4 T)} (h (21-20 \gamma^h)+4 T (-1+\gamma^h)) + \\
& e^{8 a T} (h (20-19 \gamma^h)+6 T (-1+\gamma^h))+e^{-2 a (h-5 T)} (h (8-5 \gamma^h) + \\
& 2 T (-8+7 \gamma^h))+e^{10 a (h+T)} (2 T (4-5 \gamma^h)+h (-16+19 \gamma^h)) + \\
& 2 e^{4 a h+10 a T} (-2 T (-2+\gamma^h)+h (-28+25 \gamma^h))-2 e^{4 a (h+2 T)} (-3 T (-1+\gamma^h) + \\
& h (-29+28 \gamma^h))+e^{2 a (h+5 T)} (2 T (-4+5 \gamma^h)+h (-32+29 \gamma^h)) + \\
& e^{6 a h+10 a T} (-2 T (-8+7 \gamma^h)+h (-56+53 \gamma^h)))) \operatorname{Log}[\gamma] - \\
& 2 a (B (6 e^{4 a h+14 a T} h^2 \gamma^h-10 e^{2 a (6 h+5 T)} h (h-T) \gamma^h-2 e^{8 a (2 h+T)} (h-T)^2 \gamma^h - \\
& e^{8 a h+12 a T} h (8 h+3 T) \gamma^h+3 e^{-8 a h+14 a T} h^2 (-3+\gamma^h)+27 e^{-2 a (h-7 T)} \\
& h^2 (-1+\gamma^h)+6 e^{-6 a h+14 a T} h^2 (-3+2 \gamma^h)+6 e^{14 a T} h^2 (-3+4 \gamma^h) + \\
& 3 e^{2 a (h+7 T)} h^2 (-3+5 \gamma^h)+3 e^{-4 a h+14 a T} h^2 (-9+7 \gamma^h) + \\
& e^{6 a h+10 a T} h (-45 h-54 T+93 h \gamma^h+44 T \gamma^h)+e^{6 a (h+2 T)} h
\end{aligned}$$

$$\begin{aligned}
& (9(h+T) - (37h+9T)\gamma^h) + e^{4a(h+3T)} h(9(6h+T) - (82h+9T)\gamma^h) - \\
& e^{8a(h+T)} (9(h^2 - 7hT + T^2) + (15h^2 + 57hT - 11T^2)\gamma^h) + \\
& e^{2a(h+4T)} (108h^2 - 45hT + (-94h^2 + 49hT - 2T^2)\gamma^h) - \\
& e^{10a(h+8aT)} (9h(3h-5T) + (-13h^2 + 49hT - 2T^2)\gamma^h) + e^{12aT} h \\
& (3T\gamma^h + h(135 - 127\gamma^h)) + e^{2a(h+6T)} h(h(99 - 119\gamma^h) + T(9 - 6\gamma^h)) + \\
& e^{14a(h+8aT)} (h-T)(9T(-1+\gamma^h) + h(9+\gamma^h)) + \\
& 2e^{-2a(h-5T)} h(T(27 - 22\gamma^h) + 24h(-3+2\gamma^h)) - \\
& e^{-6a(h-2T)} h(T(9 - 6\gamma^h) + 4h(-9+4\gamma^h)) - \\
& e^{10a(h+T)} h(T(27 - 37\gamma^h) + 3h(-9+5\gamma^h)) + e^{-2a(h-6T)} h(9T(-1+\gamma^h) - \\
& 14h(-9+7\gamma^h)) + 2e^{8a(h+10aT)} h(27T(-1+\gamma^h) + h(9+10\gamma^h)) - \\
& e^{-2a(h+8aT)} (2h-T)(T(9-7\gamma^h) + h(-18+11\gamma^h)) + \\
& e^{6a(h+8aT)} (h^2(36-60\gamma^h) + 2T^2(-9+8\gamma^h) - 3hT(-18+11\gamma^h)) + \\
& e^{2a(h+5T)} h(T(27-37\gamma^h) + 12h(-18+17\gamma^h)) + \\
& e^{4a(h+10aT)} h(T(-27+7\gamma^h) + 9h(-15+19\gamma^h)) + \\
& e^{12a(h+8aT)} (-T^2(-9+7\gamma^h) + 2h^2(-9+8\gamma^h) - hT(-9+20\gamma^h)) + \\
& e^{4a(h+2T)} (h^2(99-97\gamma^h) + T^2(-9+7\gamma^h) + hT(-9+20\gamma^h)) + \\
& e^{-4a(h+10aT)} h(T(27-17\gamma^h) + h(-54+28\gamma^h)) - \\
& e^{-4a(h-3T)} h(-9T(-1+\gamma^h) + h(-81+53\gamma^h)) + \\
& e^{8aT} (h^2(90-64\gamma^h) - 9T^2(-1+\gamma^h) + hT(-63+53\gamma^h)) + \\
& e^{10aT} h(-54T(-1+\gamma^h) + h(-207+169\gamma^h)) + \\
& 2T(12e^{4a(h+14aT)} h\gamma^h + e^{-6a(h+10aT)} (h-T)\gamma^h - e^{8a(h+12aT)} (5h+12T)\gamma^h + \\
& e^{2a(h+5T)} (-49h+33T)\gamma^h + 6e^{-8a(h+14aT)} h(-3+\gamma^h) + \\
& 54e^{-2a(h-7T)} h(-1+\gamma^h) + 12e^{-6a(h+14aT)} h(-3+2\gamma^h) + \\
& 12e^{14aT} h(-3+4\gamma^h) + 6e^{2a(h+7T)} h(-3+5\gamma^h) + 6e^{-4a(h+14aT)} h \\
& (-9+7\gamma^h) + e^{12a(h+8aT)} (-36h-54T+61h\gamma^h+58T\gamma^h) + 4e^{4a(h+3T)} \\
& (9(h+T) - (19h+9T)\gamma^h) + e^{2a(h+6T)} (36(2h+T) - (119h+24T)\gamma^h) + \\
& e^{2a(h+5T)} (306h+90T - (263h+121T)\gamma^h) + e^{10aT} \\
& (54h+180T - (51h+179T)\gamma^h) + e^{12aT} (12T\gamma^h + h(180-163\gamma^h)) - \\
& 2e^{14a(h+8aT)} (T(9-11\gamma^h) + 3h(-3+\gamma^h)) + 4e^{-4a(h-3T)} (h(36-23\gamma^h) + \\
& 9T(-1+\gamma^h)) + e^{-6a(h-2T)} (h(72-37\gamma^h) + 12T(-3+2\gamma^h)) - \\
& 4e^{6a(h+2T)} (9T(-1+\gamma^h) + h(9+4\gamma^h)) + e^{4a(h+10aT)} (h(576-487\gamma^h) + \\
& 5T(-18+5\gamma^h)) + 2e^{-4a(h+10aT)} (T(45-29\gamma^h) + 5h(-9+5\gamma^h)) + \\
& 3e^{-2a(h-5T)} (T(60-49\gamma^h) + 3h(-12+7\gamma^h)) - 4e^{-2a(h-6T)} \\
& (-9T(-1+\gamma^h) + 5h(-9+7\gamma^h)) - 2e^{8aT} (h(99-83\gamma^h) + \\
& T(-27+25\gamma^h)) + e^{-2a(h+8aT)} (-2T(-9+7\gamma^h) + h(-36+29\gamma^h)) + \\
& 4e^{10a(h+8aT)} (18T(-1+\gamma^h) + h(-45+56\gamma^h)) - 2e^{10a(h+T)} \\
& (T(45-61\gamma^h) + 2h(-45+56\gamma^h)) - 3e^{6a(h+10aT)} (T(60-49\gamma^h) + \\
& 3h(-66+61\gamma^h)) + 4e^{2a(h+4T)} (-18T(-1+\gamma^h) + h(-99+91\gamma^h)) + \\
& e^{8a(h+10aT)} (h(432-435\gamma^h) + T(-180+179\gamma^h)) + 2e^{8a(h+T)}
\end{aligned}$$

$$\begin{aligned}
& \left(T (-27 + 25 \gamma^h) + h (-207 + 217 \gamma^h) \right) + e^{4a(h+2T)} \left(T (54 - 58 \gamma^h) + \right. \\
& \quad \left. h (-576 + 539 \gamma^h) \right) + e^{6ah+8aT} \left(-8T \gamma^h + h (-558 + 565 \gamma^h) \right) \Big) \text{Log}[\gamma]^2 - \\
3 \Big(& B \left(3 e^{2a(-5h+8T)} h^2 - 3 e^{16aT} h^2 \gamma^h + 11 e^{4ah+14aT} h^2 \gamma^h - 9 e^{2a(6h+5T)} \right. \\
& \quad h (h-T) \gamma^h - 2 e^{8a(2h+T)} (h-T)^2 \gamma^h - 5 e^{8ah+12aT} h (h+T) \gamma^h + e^{-4a(h-4T)} \\
& \quad h^2 (3 - 6 \gamma^h) + e^{-8ah+14aT} h^2 (-12 + \gamma^h) - e^{-6a(h-2T)} h (4h-T) (-6 + \gamma^h) + \\
& \quad 3 e^{-4ah+10aT} h (2h-T) (-4 + \gamma^h) - e^{-2ah+8aT} (-2h+T)^2 (-3 + \gamma^h) - \\
& \quad 3 e^{-6ah+16aT} h^2 (-2 + \gamma^h) - 3 e^{-2a(h-8T)} h^2 (-1 + \gamma^h) + 36 e^{-2a(h-7T)} h^2 \\
& \quad (-1 + \gamma^h) - 3 e^{-8a(h-2T)} h^2 (-1 + \gamma^h) + e^{-6ah+14aT} h^2 (-24 + 13 \gamma^h) + \\
& \quad e^{2a(h+7T)} h^2 (-12 + 23 \gamma^h) + e^{-4ah+14aT} h^2 (-36 + 25 \gamma^h) + \\
& \quad e^{14aT} h^2 (-24 + 35 \gamma^h) + 3 e^{14ah+8aT} (h-T) (h-T + (2h+T) \gamma^h) + \\
& \quad e^{2a(h+6T)} h (6(12h+T) - (98h+T) \gamma^h) + e^{6a(h+2T)} h \\
& \quad (6(h+T) - (37h+6T) \gamma^h) + e^{4a(h+3T)} h (6(7h+T) - (67h+6T) \gamma^h) - \\
& \quad e^{10ah+8aT} (6h^2 - 18hT + (h^2 + 22hT - 2T^2) \gamma^h) + 2 e^{2a(h+4T)} \\
& \quad (24h^2 - 9hT - (19h^2 - 11hT + T^2) \gamma^h) + e^{8a(h+T)} (3(h^2 + 8hT - T^2) + \\
& \quad (-22h^2 - 19hT + 5T^2) \gamma^h) + e^{12aT} h (5T \gamma^h + h(102 - 91 \gamma^h)) - \\
& \quad 3 e^{8aT} (-2h+T) (-3h(-2 + \gamma^h) + T(-1 + \gamma^h)) + e^{8ah+10aT} h \\
& \quad (29h \gamma^h + 24T(-1 + \gamma^h)) - e^{10a(h+T)} h (h(-12 + \gamma^h) - 3T(-4 + 7 \gamma^h)) + \\
& \quad e^{12ah+8aT} (-T^2(-3 + \gamma^h) + h^2(-9 + 5 \gamma^h) - 2hT(-3 + 7 \gamma^h)) + \\
& \quad e^{4a(h+2T)} (h^2(48 - 47 \gamma^h) + T^2(-3 + \gamma^h) + 2hT(-3 + 7 \gamma^h)) - \\
& \quad e^{-4a(h-3T)} h (-6T(-1 + \gamma^h) + h(-60 + 29 \gamma^h)) + \\
& \quad e^{-2a(h-5T)} h (-3T(-8 + 5 \gamma^h) + h(-72 + 34 \gamma^h)) + \\
& \quad 3 e^{4ah+10aT} h (-2T(2 + \gamma^h) + h(-28 + 37 \gamma^h)) - \\
& \quad e^{6ah+8aT} (hT(-18 + \gamma^h) - 2T^2(-3 + 2 \gamma^h) + h^2(-27 + 41 \gamma^h)) - \\
& \quad e^{-2a(h-6T)} h (-6T(-1 + \gamma^h) + h(-90 + 65 \gamma^h)) + \\
& \quad e^{6ah+10aT} h (3T(-8 + 5 \gamma^h) + h(-36 + 74 \gamma^h)) + \\
& \quad e^{10aT} h (-24T(-1 + \gamma^h) + h(-108 + 79 \gamma^h)) + \\
& \quad e^{2a(h+5T)} h (-3T(-4 + 7 \gamma^h) + h(-120 + 109 \gamma^h)) \Big) + \\
4 T \Big(& 8 e^{2a(-5h+8T)} h - 8 e^{16aT} h \gamma^h + 31 e^{4ah+14aT} h \gamma^h + e^{8ah+12aT} \\
& (41h - 37T) \gamma^h - 10 e^{2a(6h+5T)} (3h - 2T) \gamma^h + e^{-6ah+10aT} (h-T) \gamma^h - \\
& 3 e^{-8ah+12aT} (h-T) \gamma^h - 8 e^{-6ah+16aT} h (-2 + \gamma^h) - 8 e^{-2a(h-8T)} h (-1 + \gamma^h) + \\
& 116 e^{-2a(h-7T)} h (-1 + \gamma^h) - 8 e^{-8a(h-2T)} h (-1 + \gamma^h) - 8 e^{-4a(h-4T)} h \\
& (-1 + 2 \gamma^h) + 21 e^{14aT} h (-4 + 5 \gamma^h) + e^{-8ah+14aT} h (-32 + 11 \gamma^h) + \\
& e^{-6ah+14aT} h (-84 + 43 \gamma^h) + e^{2a(h+7T)} h (-32 + 73 \gamma^h) + \\
& e^{-4ah+14aT} h (-116 + 85 \gamma^h) + e^{6ah+10aT} (292h - 72T - 285h \gamma^h + 52T \gamma^h) + \\
& e^{-2a(h-6T)} (132h - 60T - 122h \gamma^h + 57T \gamma^h) + \\
& e^{10aT} (T(72 - 71 \gamma^h) + h(76 - 54 \gamma^h)) + 2 e^{12aT} (17T \gamma^h + h(54 - 47 \gamma^h)) + \\
& e^{-4a(h-3T)} (h(144 - 85 \gamma^h) + 60T(-1 + \gamma^h)) + \\
& e^{-4ah+10aT} (T(36 - 17 \gamma^h) + 4h(-7 + 4 \gamma^h)) + e^{-2ah+8aT} \\
& (-2T(-4 + \gamma^h) + h(-16 + 5 \gamma^h)) + 2 e^{14ah+8aT} (4h + T(-4 + 5 \gamma^h)) +
\end{aligned}$$

$$\begin{aligned}
& e^{-2a(h-5T)} (72T - 52T\gamma^h + h(-16 + 9\gamma^h)) + e^{12ah+8aT} (6h(-4 + 5\gamma^h) + \\
& \quad 2T(-10 + 13\gamma^h)) + e^{-6a(h-2T)} (h(84 - 36\gamma^h) + T(-60 + 23\gamma^h)) + \\
& e^{4a(h+3T)} (-60T(-1 + \gamma^h) + h(-36 + 29\gamma^h)) + e^{6a(h+2T)} \\
& \quad (60T - 57T\gamma^h + h(-96 + 34\gamma^h)) + e^{8aT} (2T(10 - 9\gamma^h) + h(-84 + 51\gamma^h)) - \\
& e^{2a(h+6T)} (T(-60 + 23\gamma^h) + h(48 + 52\gamma^h)) + e^{10a(h+T)} (h(80 - 115\gamma^h) + \\
& \quad T(-36 + 55\gamma^h)) + e^{8ah+10aT} (h(200 - 222\gamma^h) + T(-72 + 71\gamma^h)) - \\
& 2e^{2a(h+5T)} (9T(-2 + 3\gamma^h) + h(-98 + 81\gamma^h)) + e^{10ah+8aT} (28T(-1 + \gamma^h) + \\
& \quad h(-64 + 115\gamma^h)) + e^{2a(h+4T)} (-28T(-1 + \gamma^h) + h(-148 + 141\gamma^h)) + \\
& e^{8a(h+T)} (2T(-10 + 9\gamma^h) + h(-192 + 181\gamma^h)) + e^{4a(h+2T)} (20T - \\
& \quad 26T\gamma^h + h(-252 + 202\gamma^h)) + e^{6ah+8aT} (-8T\gamma^h + h(-204 + 251\gamma^h)) - \\
& e^{4ah+10aT} (3T(12 + \gamma^h) + h(-304 + 262\gamma^h))) \text{Log}[\gamma]^3 + \\
& (1 - e^{4ah}) \theta^2 (e^{-4a(h+T)} (1 - e^{2ah}) (1 + e^{2ah}) (1 + e^{4ah}) (1 + e^{2ah} + e^{4ah}) \\
& \quad (Bh - T) (4a^2 e^{2a(h+T)} (-1 + e^{4ah}) (h - T) (-1 + \gamma^h) + 2a e^{2aT} (1 + e^{2ah}) \\
& \quad (e^{2a(h+T)} h\gamma^h + e^{2aT} h(-2 + \gamma^h) + e^{4ah} (h(-2 + \gamma^h) - 2T(-1 + \gamma^h)) + \\
& \quad e^{2ah} (h(4 - 3\gamma^h) + 2T(-1 + \gamma^h))) \text{Log}[\gamma] + e^{2a(-h+T)} \\
& \quad (3e^{4aT} h + 5e^{2a(3h+T)} h\gamma^h - 3e^{2a(h+2T)} h\gamma^h + 2e^{10ah} (h - T)\gamma^h + \\
& \quad e^{2a(h+T)} h(-6 + \gamma^h) - e^{4ah} (2h - T)(-3 + \gamma^h) + 6e^{2a(2h+T)} h(-1 + \gamma^h) - \\
& \quad e^{8ah} (3h - 3T + (4h + T)\gamma^h) + e^{6ah} (2T\gamma^h + h(6 - 5\gamma^h))) \text{Log}[\gamma]^2)^2 - \\
& e^{-4a(h+T)} (-1 + e^{4ah})^2 hT (-16a^4 e^{4a(h+T)} (-1 - e^{2ah} - e^{4ah} + e^{8ah} + \\
& \quad e^{10ah} + e^{12ah}) (h - T) (-1 + \gamma^h)^2 + 16a^3 (1 - \gamma^h) \\
& \quad (e^{14ah+6aT} h\gamma^h + e^{2a(h+3T)} h(-2 + \gamma^h) - 6e^{10ah+4aT} h(-1 + \gamma^h) + \\
& \quad 6e^{8ah+6aT} h(-1 + \gamma^h) + e^{4ah+6aT} h(-4 + 3\gamma^h) + e^{6a(2h+T)} h(-2 + 3\gamma^h) + \\
& \quad e^{6a(h+T)} h(-6 + 5\gamma^h) + e^{10ah+6aT} h(-4 + 5\gamma^h) + \\
& \quad e^{14ah+4aT} (2T - (h + 2T)\gamma^h) + e^{4a(3h+T)} (2(h + T) - (3h + 2T)\gamma^h) + \\
& \quad e^{4a(4h+T)} (h(-2 + \gamma^h) - 2T(-1 + \gamma^h)) + e^{4a(2h+T)} \\
& \quad (h(8 - 7\gamma^h) + 2T(-1 + \gamma^h)) + e^{6ah+4aT} (h(6 - 5\gamma^h) + 2T(-1 + \gamma^h)) + \\
& \quad e^{4a(h+T)} (h(4 - 3\gamma^h) + 2T(-1 + \gamma^h))) \text{Log}[\gamma] + \\
& 4a^2 (3e^{12ah+8aT} h\gamma^2 h + 2e^{14ah+6aT} h\gamma^h (15 - 13\gamma^h) + 4e^{18ah+4aT} (h - T) \\
& \quad \gamma^h (3 - 2\gamma^h) - 108e^{8ah+6aT} h(-1 + \gamma^h)^2 + 3e^{10ah+8aT} h\gamma^h (-6 + 5\gamma^h) + \\
& \quad 3e^{8aT} h(6 - 6\gamma^h + \gamma^2 h) - 2e^{2a(h+3T)} h(18 - 21\gamma^h + 5\gamma^2 h) + \\
& \quad 3e^{2a(h+4T)} h(6 - 12\gamma^h + 5\gamma^2 h) + 6e^{6ah+8aT} h(3 - 9\gamma^h + 5\gamma^2 h) + \\
& \quad 3e^{4a(h+2T)} h(12 - 18\gamma^h + 7\gamma^2 h) + 3e^{8a(h+T)} h(6 - 12\gamma^h + 7\gamma^2 h) - \\
& \quad 2e^{4ah+6aT} h(36 - 57\gamma^h + 23\gamma^2 h) - 2e^{6a(2h+T)} h(18 - 51\gamma^h + 31\gamma^2 h) - \\
& \quad 2e^{6a(h+T)} h(54 - 93\gamma^h + 41\gamma^2 h) - 2e^{10ah+6aT} h(36 - 87\gamma^h + 49\gamma^2 h) + \\
& \quad 2e^{10ah+4aT} (45h - 3(29h - 2T)\gamma^h + (43h - 4T)\gamma^2 h) + \\
& \quad e^{4a(3h+T)} (18(2h + T) - 6(19h + 4T)\gamma^h + (67h + 10T)\gamma^2 h) + \\
& \quad e^{4a(4h+T)} (18T(-1 + \gamma^h)^2 + h(-18 + 6\gamma^h + 5\gamma^2 h)) + \\
& \quad e^{4a(h+T)} (-2T(9 - 12\gamma^h + 5\gamma^2 h) + h(36 - 48\gamma^h + 17\gamma^2 h)) + \\
& \quad e^{14ah+4aT} (18T(-1 + \gamma^h)^2 + h(18 - 48\gamma^h + 29\gamma^2 h)) +
\end{aligned}$$

$$\begin{aligned}
& e^{6ah+4aT} \left(-18T(-1+\gamma^h)^2 + h(72-114\gamma^h+49\gamma^{2h}) \right) + \\
& e^{4a(2h+T)} \left(-18T(-1+\gamma^h)^2 + h(90-168\gamma^h+79\gamma^{2h}) \right) \Big) \operatorname{Log}[\gamma]^2 + \\
12a & \left(-4e^{16ah+6aT} h\gamma^{2h} + 9e^{12ah+8aT} h\gamma^{2h} - 5e^{8ah+10aT} h\gamma^{2h} + \right. \\
& e^{14ah+6aT} h\gamma^h(39-31\gamma^h) + 5e^{6ah+10aT} h\gamma^h(3-2\gamma^h) + \\
& 5e^{-2a(h-5T)} h(-2+\gamma^h) - 10e^{2a(h+5T)} h(-1+\gamma^h)^2 - \\
& 10e^{4ah+10aT} h(-1+\gamma^h)^2 + e^{10ah+8aT} h\gamma^h(-42+29\gamma^h) + \\
& 4e^{18ah+4aT} \gamma^h(3h-3T-(h-2T)\gamma^h) + e^{8aT} h(30-18\gamma^h+\gamma^{2h}) - \\
& 3e^{2a(h+3T)} h(10-7\gamma^h+\gamma^{2h}) - 5e^{10aT} h(2-4\gamma^h+\gamma^{2h}) + \\
& 2e^{4a(h+T)}(2h-T)(5-4\gamma^h+\gamma^{2h}) + 3e^{2a(h+4T)} h(10-20\gamma^h+7\gamma^{2h}) + \\
& 2e^{6ah+8aT} h(15-51\gamma^h+25\gamma^{2h}) - e^{4ah+6aT} h(60-81\gamma^h+29\gamma^{2h}) - \\
& 3e^{10ah+6aT} h(20-53\gamma^h+29\gamma^{2h}) + e^{4a(h+2T)} h(60-78\gamma^h+31\gamma^{2h}) + \\
& e^{8a(h+T)} h(30-60\gamma^h+39\gamma^{2h}) - 2e^{8ah+6aT} h(45-90\gamma^h+43\gamma^{2h}) - \\
& e^{6a(h+T)} h(90-141\gamma^h+59\gamma^{2h}) - e^{6a(2h+T)} h(30-99\gamma^h+61\gamma^{2h}) + \\
& 2e^{10ah+4aT}(35h+(-55h+6T)\gamma^h+(27h-4T)\gamma^{2h}) + \\
& 2e^{4a(3h+T)}(5(2h+T)-(53h+4T)\gamma^h+(28h+T)\gamma^{2h}) + \\
& e^{4a(4h+T)}(10T(-1+\gamma^h)^2+h(-10-19\gamma^h+12\gamma^{2h})) + \\
& e^{6ah+4aT}(-10T(-1+\gamma^h)^2+h(50-61\gamma^h+23\gamma^{2h})) + \\
& e^{14ah+4aT}(10T(-1+\gamma^h)^2+h(20-37\gamma^h+27\gamma^{2h})) + \\
& e^{4a(2h+T)}(-10T(-1+\gamma^h)^2+h(50-103\gamma^h+48\gamma^{2h})) \Big) \operatorname{Log}[\gamma]^3 + \\
3 & \left(35e^{-4a(h-3T)} h + 35e^{4a(h+3T)} h\gamma^{2h} - 56e^{16ah+6aT} h\gamma^{2h} + \right. \\
& 123e^{12ah+8aT} h\gamma^{2h} - 110e^{8ah+10aT} h\gamma^{2h} - 8e^{4a(5h+T)}(h-T)\gamma^{2h} + \\
& e^{-2a(h-6T)} h(35-70\gamma^h) + 10e^{14ah+6aT} h\gamma^h(25-19\gamma^h) + \\
& 10e^{6ah+10aT} h\gamma^h(27-14\gamma^h) + 10e^{-2a(h-5T)} h(-14+\gamma^h) + \\
& 35e^{2a(h+6T)} h\gamma^h(-2+\gamma^h) + 35e^{12aT} h(-1+\gamma^h)^2 - \\
& 140e^{2a(h+5T)} h(-1+\gamma^h)^2 - 140e^{4ah+10aT} h(-1+\gamma^h)^2 + \\
& 3e^{10ah+8aT} h\gamma^h(-130+69\gamma^h) + 3e^{8aT} h(70-10\gamma^h+\gamma^{2h}) - \\
& 10e^{10aT} h(14-28\gamma^h+3\gamma^{2h}) - 2e^{2a(h+3T)} h(70-15\gamma^h+3\gamma^{2h}) + \\
& e^{4a(h+T)}(2h-T)(35-10\gamma^h+3\gamma^{2h}) - 10e^{4ah+6aT} h(28-31\gamma^h+9\gamma^{2h}) - \\
& 28e^{8ah+6aT} h(15-30\gamma^h+13\gamma^{2h}) - 10e^{6a(h+T)} h(42-59\gamma^h+23\gamma^{2h}) + \\
& 3e^{2a(h+4T)} h(70-140\gamma^h+29\gamma^{2h}) - 10e^{6a(2h+T)} h(14-53\gamma^h+33\gamma^{2h}) + \\
& 6e^{6ah+8aT} h(35-135\gamma^h+49\gamma^{2h}) + 3e^{4a(h+2T)} h(140-150\gamma^h+71\gamma^{2h}) + \\
& 3e^{8a(h+T)} h(70-140\gamma^h+111\gamma^{2h}) - 2e^{10ah+6aT} h(140-405\gamma^h+207\gamma^{2h}) + \\
& e^{10ah+4aT}(350h-60(5h-T)\gamma^h+(207h-32T)\gamma^{2h}) + \\
& e^{4a(3h+T)}(35(h+T)-10(65h+T)\gamma^h+(191h-5T)\gamma^{2h}) + \\
& e^{14ah+4aT}(35(3h+T)-70(h+T)\gamma^h+(206h+27T)\gamma^{2h}) + \\
& 4e^{18ah+4aT}\gamma^h(3h(5+2\gamma^h)+T(-15+8\gamma^h)) + \\
& e^{6ah+4aT}(10h(21-17\gamma^h+6\gamma^{2h})-T(35-70\gamma^h+27\gamma^{2h})) + \\
& e^{4a(4h+T)}(35T(-1+\gamma^h)^2+h(-35-180\gamma^h+32\gamma^{2h})) + \\
& e^{4a(2h+T)}(-35T(-1+\gamma^h)^2+h(140-420\gamma^h+157\gamma^{2h})) \Big) \operatorname{Log}[\gamma]^4 +
\end{aligned}$$

$$\begin{aligned}
& e^{2a(h-3T)} (1 - e^{2ah}) (1 + e^{2ah}) T (16a^4 e^{-2ah+6aT} (-1 + e^{4ah})^2 \\
& (1 + e^{2ah} + 2e^{4ah} + e^{6ah} + e^{8ah}) (2h^2 - 3hT + T^2) (-1 + \gamma^h)^2 + \\
& 16a^3 (2h - T) (1 - \gamma^h) (2e^{4a(h+2T)} h - e^{12ah+8aT} h \gamma^h + \\
& e^{10ah+8aT} h (2 - 3\gamma^h) + e^{6ah+8aT} h (4 - 3\gamma^h) + e^{-4ah+8aT} h (-2 + \gamma^h) + \\
& 4e^{8aT} h (-1 + \gamma^h) - 4e^{8a(h+T)} h (-1 + \gamma^h) - 4e^{2a(h+3T)} h (-1 + \gamma^h) + \\
& 4e^{10ah+6aT} h (-1 + \gamma^h) + e^{-2ah+8aT} h (-4 + 3\gamma^h) + e^{2a(h+4T)} h (-2 + 3\gamma^h) + \\
& e^{4ah+6aT} (2T - (h+2T)\gamma^h) + e^{6a(2h+T)} (-2T + (h+2T)\gamma^h) + \\
& e^{6aT} (h(6 - 5\gamma^h) + 2T(-1 + \gamma^h)) + e^{-2ah+6aT} (h(4 - 3\gamma^h) + 2T(-1 + \gamma^h)) + \\
& e^{14ah+6aT} (-h(-2 + \gamma^h) + 2T(-1 + \gamma^h)) + 2e^{6a(h+T)} (-2T(-1 + \gamma^h) + \\
& h(-3 + 2\gamma^h)) + e^{8ah+6aT} (-2T(-1 + \gamma^h) + h(-6 + 5\gamma^h)) \Big) \text{Log}[\gamma] - \\
& 8a^2 (-3e^{4ah+10aT} h(1 - \gamma^h) (2h + T - (6h + T)\gamma^h) - 3e^{2a(h+5T)} \\
& h(6h + T - (18h + T)\gamma^h + 11h\gamma^{2h}) - \\
& e^{10ah+8aT} h(60h - 26T + (-150h + 67T)\gamma^h + (85h - 41T)\gamma^{2h}) + \\
& e^{-2ah+8aT} h(84h - 52T + (-126h + 89T)\gamma^h + (47h - 37T)\gamma^{2h}) + \\
& e^{-4ah+8aT} h(48h - 26T + (-58h + 37T)\gamma^h + (15h - 11T)\gamma^{2h}) - \\
& e^{-2ah+6aT} (2h - T) (12h - 5T - 2(7h - 4T)\gamma^h + (4h - 3T)\gamma^{2h}) - \\
& 3e^{10aT} h(12h + (-26h + T)\gamma^h + (13h - T)\gamma^{2h}) - \\
& 2e^{4a(h+2T)} h(60h - 13T + (-84h + 11T)\gamma^h + (29h + 2T)\gamma^{2h}) - \\
& e^{2a(h+4T)} h(12h + 26T + (6h - 67T)\gamma^h + (-13h + 41T)\gamma^{2h}) + \\
& e^{2a(h+3T)} (30h^2 + hT - 2(24h^2 + 6hT - T^2)\gamma^h + (20h^2 + 9hT - 2T^2)\gamma^{2h}) + \\
& e^{10ah+6aT} (78h^2 - hT - 2(84h^2 - 6hT + T^2)\gamma^h + (88h^2 - 9hT + 2T^2)\gamma^{2h}) + \\
& e^{4ah+6aT} (90h^2 - 21hT + 5T^2 - 4(39h^2 - 7hT + 2T^2)\gamma^h + \\
& (70h^2 - 9hT + 3T^2)\gamma^{2h}) + 3e^{8ah+10aT} h\gamma^h (T - T\gamma^h + h(-2 + \gamma^h)) + \\
& e^{12ah+8aT} h\gamma^h (h(34 - 29\gamma^h) + 15T(-1 + \gamma^h)) + \\
& 3e^{6ah+10aT} h(1 - \gamma^h) (T(-1 + \gamma^h) + 2h(1 + \gamma^h)) - \\
& 3e^{-4ah+10aT} h(-1 + \gamma^h) (T - T\gamma^h + 2h(-5 + 3\gamma^h)) - \\
& 2e^{16ah+6aT} (h - T)\gamma^h (T - T\gamma^h + h(-4 + 3\gamma^h)) - \\
& 3e^{-2a(h-5T)} h(-1 + \gamma^h) (T - T\gamma^h + 2h(-7 + 5\gamma^h)) + \\
& 4e^{8aT} h(-1 + \gamma^h) (-13T(-1 + \gamma^h) + h(-15 + 13\gamma^h)) - \\
& 4e^{8a(h+T)} h(-1 + \gamma^h) (-13T(-1 + \gamma^h) + h(-33 + 31\gamma^h)) - \\
& 3e^{-6ah+10aT} h(T(-1 + \gamma^h) + h(6 - 6\gamma^h + \gamma^{2h})) + e^{14ah+6aT} \\
& (-5T^2(-1 + \gamma^h)^2 + h^2(-18 + 10\gamma^h + 3\gamma^{2h}) + hT(23 - 39\gamma^h + 16\gamma^{2h})) + \\
& e^{6aT} (-5T^2(-1 + \gamma^h)^2 + h^2(-24 + 26\gamma^h - 7\gamma^{2h}) + hT(24 - 41\gamma^h + 17\gamma^{2h})) + \\
& e^{6a(2h+T)} (-T^2(5 - 8\gamma^h + 3\gamma^{2h}) + \\
& hT(21 - 28\gamma^h + 9\gamma^{2h}) + 2h^2(9 - 30\gamma^h + 19\gamma^{2h})) + \\
& e^{6ah+8aT} h(h(-156 + 270\gamma^h - 119\gamma^{2h}) + T(52 - 89\gamma^h + 37\gamma^{2h})) + \\
& e^{6a(h+T)} (2T^2(5 - 9\gamma^h + 4\gamma^{2h}) - hT(45 - 69\gamma^h + 26\gamma^{2h}) + \\
& h^2(150 - 254\gamma^h + 113\gamma^{2h})) + e^{8ah+6aT} (T^2(5 - 12\gamma^h + 7\gamma^{2h}) - \\
& hT(24 - 51\gamma^h + 25\gamma^{2h}) + h^2(132 - 250\gamma^h + 121\gamma^{2h})) \Big) \text{Log}[\gamma]^2 -
\end{aligned}$$

$$\begin{aligned}
& 4 a \left(15 e^{4 a (h+3 T)} h^2 \gamma^{2 h} - 12 e^{14 a h+8 a T} h (2 h-T) \gamma^{2 h} - 30 e^{-8 a h+12 a T} \right. \\
& \quad h^2 (-2+\gamma^h) + 2 e^{-6 a h+8 a T} h (h-T) \gamma^h (-2+\gamma^h) + \\
& \quad 90 e^{-2 a (h-6 T)} h^2 (-1+\gamma^h)^2 + 15 e^{2 a (h+6 T)} h^2 \gamma^h (-3+4 \gamma^h) + e^{12 a h+8 a T} \\
& \quad h \gamma^h (282 h-113 T-111 (2 h-T) \gamma^h) + 15 e^{-6 a (h-2 T)} h^2 (6-9 \gamma^h+2 \gamma^{2 h}) + \\
& \quad 30 e^{12 a T} h^2 (1-5 \gamma^h+3 \gamma^{2 h}) + 15 e^{-4 a (h-3 T)} h^2 (6-12 \gamma^h+5 \gamma^{2 h}) + \\
& \quad e^{8 a T} h (246 h-276 T+(-485 h+548 T) \gamma^h+(217 h-262 T) \gamma^{2 h}) - \\
& \quad e^{8 a (h+T)} h (768 h-276 T+(-1529 h+548 T) \gamma^h+(739 h-262 T) \gamma^{2 h}) + \\
& \quad e^{2 a (h+4 T)} h (-6 (29 h+23 T)+(98 h+381 T) \gamma^h+(11 h-233 T) \gamma^{2 h}) + \\
& \quad e^{10 a h+8 a T} h (-348 h+138 T+5 (190 h-77 T) \gamma^h-5 (107 h-47 T) \gamma^{2 h}) + \\
& \quad e^{-4 a h+8 a T} h (246 h-138 T+(-235 h+167 T) \gamma^h+(56 h-41 T) \gamma^{2 h}) - \\
& \quad e^{6 a h+8 a T} h (942 h-276 T+(-1599 h+439 T) \gamma^h+9 (77 h-17 T) \gamma^{2 h}) + \\
& \quad e^{-2 a h+8 a T} h (420 h-276 T+(-555 h+439 T) \gamma^h+15 (13 h-11 T) \gamma^{2 h}) - \\
& \quad e^{4 a (h+2 T)} h (768 h-138 T+(-997 h+54 T) \gamma^h+2 (178 h+35 T) \gamma^{2 h}) + \\
& \quad e^{10 a h+6 a T} (348 h^2+66 h T-2 (455 h^2+44 h T+2 T^2) \gamma^h + \\
& \quad (521 h^2+36 h T+4 T^2) \gamma^{2 h}) + 2 e^{16 a h+6 a T} \\
& \quad \gamma^h (h^2 (20-7 \gamma^h)-2 T^2 (-1+\gamma^h)+h T (-22+15 \gamma^h)) + \\
& \quad 3 e^{6 a h+10 a T} h (1-\gamma^h) (18 T (-1+\gamma^h)+h (44+15 \gamma^h)) + \\
& \quad 3 e^{8 a h+10 a T} h \gamma^h (-18 T (-1+\gamma^h)+h (-44+21 \gamma^h)) - \\
& \quad 3 e^{4 a h+10 a T} h (-1+\gamma^h) (18 T (-1+\gamma^h)+h (2+41 \gamma^h)) - \\
& \quad 3 e^{-4 a h+10 a T} h (-1+\gamma^h) (-18 T (-1+\gamma^h)+h (-112+53 \gamma^h)) - \\
& \quad 3 e^{-2 a (h-5 T)} h (-1+\gamma^h) (-18 T (-1+\gamma^h)+h (-138+95 \gamma^h)) - \\
& \quad e^{6 a T} (h T \gamma^h (-1+\gamma^h)+6 T^2 (-1+\gamma^h)^2+h^2 (-54+149 \gamma^h-52 \gamma^{2 h})) + \\
& \quad e^{-2 a h+6 a T} (6 h^2 (-6+\gamma^h)-2 T^2 (3-4 \gamma^h+\gamma^{2 h})+h T (30-21 \gamma^h+5 \gamma^{2 h})) - \\
& \quad 3 e^{-6 a h+10 a T} h (18 T (-1+\gamma^h)+h (70-53 \gamma^h+6 \gamma^{2 h})) + e^{14 a h+6 a T} \\
& \quad (-6 T^2 (-1+\gamma^h)^2+h^2 (-60-50 \gamma^h+52 \gamma^{2 h})+h T (66-131 \gamma^h+65 \gamma^{2 h})) + \\
& \quad e^{6 a (2 h+T)} (-2 T^2 (3-4 \gamma^h+\gamma^{2 h})+6 h^2 (20-57 \gamma^h+37 \gamma^{2 h}) + \\
& \quad h T (96-153 \gamma^h+71 \gamma^{2 h})) + e^{4 a h+6 a T} (2 T^2 (3-4 \gamma^h+\gamma^{2 h}) - \\
& \quad h T (96-153 \gamma^h+71 \gamma^{2 h})+6 h^2 (107-189 \gamma^h+82 \gamma^{2 h})) - \\
& \quad 3 e^{2 a (h+5 T)} h (-18 T (-1+\gamma^h)+h (24-151 \gamma^h+104 \gamma^{2 h})) - \\
& \quad 3 e^{10 a T} h (-18 T \gamma^h (-1+\gamma^h)+h (110-248 \gamma^h+115 \gamma^{2 h})) + e^{2 a (h+3 T)} (-4 T^2 \\
& \quad \gamma^h (-1+\gamma^h)-2 h T (33-44 \gamma^h+18 \gamma^{2 h})+h^2 (366-566 \gamma^h+241 \gamma^{2 h})) + \\
& \quad 2 e^{6 a (h+T)} (2 T^2 (3-5 \gamma^h+2 \gamma^{2 h})-h T (48-76 \gamma^h+35 \gamma^{2 h}) + \\
& \quad h^2 (405-716 \gamma^h+355 \gamma^{2 h})) + e^{8 a h+6 a T} (-h T \gamma^h (-43+29 \gamma^h) + \\
& \quad 2 T^2 (3-8 \gamma^h+5 \gamma^{2 h})+h^2 (708-1367 \gamma^h+676 \gamma^{2 h})) \operatorname{Log}[\gamma]^3 + \\
& \quad (210 e^{2 a (-5 h+7 T)} h^2-72 e^{-8 a h+10 a T} h (h-T) \gamma^h+210 e^{-2 a (h-7 T)} h^2 \gamma^{2 h}- \\
& \quad 390 e^{4 a (h+3 T)} h^2 \gamma^{2 h}-180 e^{10 a (h+T)} h (2 h-T) \gamma^{2 h}+ \\
& \quad 120 e^{14 a h+8 a T} h (2 h-T) \gamma^{2 h}+4 e^{6 a (3 h+T)} (2 h^2-3 h T+T^2) \gamma^{2 h}+ \\
& \quad 150 e^{2 a (h+6 T)} h^2 \gamma^h (7-8 \gamma^h)+210 e^{-8 a h+14 a T} h^2 (1-2 \gamma^h)- \\
& \quad 4 e^{-6 a h+8 a T} h (h-T) \gamma^h (-6+\gamma^h)+210 e^{-4 a h+14 a T} h^2 \gamma^h (-2+\gamma^h)-
\end{aligned}$$

$$\begin{aligned}
& 1500 e^{-2 a (h-6 T)} h^2 (-1+\gamma^h)^2 + 210 e^{-6 a h+14 a T} h^2 (-1+\gamma^h)^2 + \\
& 60 e^{-8 a h+12 a T} h^2 (-14+5 \gamma^h) + 6 e^{8 a h+10 a T} h \gamma^h \\
& (354 h-153 T-37 (4 h-3 T) \gamma^h) - 150 e^{-6 a (h-2 T)} h^2 (10-13 \gamma^h+2 \gamma^{2 h}) - \\
& 60 e^{12 a T} h^2 (11-45 \gamma^h+25 \gamma^{2 h}) - 30 e^{-4 a (h-3 T)} h^2 (50-100 \gamma^h+37 \gamma^{2 h}) - \\
& 2 e^{8 a T} h (126 h-468 T-33 (13 h-28 T) \gamma^h+(193 h-406 T) \gamma^{2 h}) + \\
& 6 e^{10 a h+8 a T} h (236 h-78 T+(-726 h+241 T) \gamma^h+(420 h-143 T) \gamma^{2 h}) + \\
& 6 e^{10 a T} h (267 h+(-662 h+141 T) \gamma^h+(335 h-111 T) \gamma^{2 h}) + \\
& 6 e^{-2 a (h-5 T)} h (414 h-123 T+(-763 h+234 T) \gamma^h+3 (98 h-41 T) \gamma^{2 h}) - \\
& 6 e^{-4 a h+8 a T} h (138 h-78 T+(-85 h+71 T) \gamma^h+(17 h-13 T) \gamma^{2 h}) + \\
& 6 e^{4 a h+10 a T} h (-156 h+123 T+(259 h-246 T) \gamma^h+3 (8 h+31 T) \gamma^{2 h}) + \\
& 2 e^{4 a (h+2 T)} h (1908 h-234 T-3 (827 h+18 T) \gamma^h+2 (479 h+109 T) \gamma^{2 h}) + \\
& 2 e^{2 a (h+4 T)} h (786 h+234 T-3 (274 h+237 T) \gamma^h+(236 h+427 T) \gamma^{2 h}) - \\
& 2 e^{2 a (h+3 T)} (711 h^2-141 h T-6 (163 h^2-30 h T-T^2) \gamma^h+ \\
& (369 h^2-89 h T-4 T^2) \gamma^{2 h}) - e^{4 a h+6 a T} (2460 h^2-327 h T+9 T^2- \\
& 6 (696 h^2-95 h T+T^2) \gamma^h+(1654 h^2-271 h T-3 T^2) \gamma^{2 h}) - \\
& 2 e^{10 a h+6 a T} (498 h^2+141 h T-6 (347 h^2+30 h T+T^2) \gamma^h+ \\
& (1084 h^2+83 h T+6 T^2) \gamma^{2 h}) - e^{8 a h+6 a T} (3030 h^2+63 h T+9 T^2- \\
& 6 (817 h^2-12 h T+5 T^2) \gamma^h+(2470 h^2-83 h T+13 T^2) \gamma^{2 h}) - \\
& 4 e^{16 a h+6 a T} \gamma^h (6 h^2 (8+\gamma^h)-T^2 (-3+2 \gamma^h)+h T (-51+26 \gamma^h)) + \\
& 2 e^{12 a h+8 a T} h \gamma^h (T (267-257 \gamma^h)+h (-762+587 \gamma^h)) - \\
& e^{-2 a h+6 a T} (3 h-T) (T (-3+\gamma^h)^2+2 h (-9-6 \gamma^h+\gamma^{2 h})) - \\
& 18 e^{2 a (h+5 T)} h (h (55+97 \gamma^h-81 \gamma^{2 h})+T (-41+31 \gamma^h+6 \gamma^{2 h})) + \\
& 6 e^{-6 a h+10 a T} h (-3 T (41-31 \gamma^h+4 \gamma^{2 h})+h (285-163 \gamma^h+17 \gamma^{2 h})) + \\
& e^{6 a T} (T^2 (9-18 \gamma^h+5 \gamma^{2 h})+3 h T (21-44 \gamma^h+7 \gamma^{2 h})- \\
& 2 h^2 (135-303 \gamma^h+58 \gamma^{2 h})) + e^{14 a h+6 a T} (h^2 (210+576 \gamma^h-224 \gamma^{2 h})+ \\
& T^2 (9-18 \gamma^h+5 \gamma^{2 h})-3 h T (73-144 \gamma^h+87 \gamma^{2 h})) - \\
& 6 e^{6 a h+10 a T} h (-3 T (41-78 \gamma^h+41 \gamma^{2 h})+h (294-309 \gamma^h+94 \gamma^{2 h})) + \\
& 6 e^{-4 a h+10 a T} h (-3 T (41-82 \gamma^h+31 \gamma^{2 h})+h (423-579 \gamma^h+163 \gamma^{2 h})) - \\
& 2 e^{-2 a h+8 a T} h (-T (468-669 \gamma^h+211 \gamma^{2 h})+h (624-675 \gamma^h+226 \gamma^{2 h})) - \\
& e^{6 a (2 h+T)} (3 T^2 (-3+2 \gamma^h+\gamma^{2 h})+h T (327-570 \gamma^h+271 \gamma^{2 h})+ \\
& 2 h^2 (315-570 \gamma^h+583 \gamma^{2 h})) - 2 e^{6 a (h+T)} (3 T^2 (3-4 \gamma^h+\gamma^{2 h})- \\
& h T (132-219 \gamma^h+131 \gamma^{2 h})+h^2 (1341-2544 \gamma^h+1334 \gamma^{2 h})) + \\
& 2 e^{6 a h+8 a T} h (-T (468-669 \gamma^h+151 \gamma^{2 h})+h (2118-3663 \gamma^h+1600 \gamma^{2 h})) + \\
& 2 e^{8 a (h+T)} h (-2 T (234-462 \gamma^h+203 \gamma^{2 h})+ \\
& h (1620-3417 \gamma^h+1687 \gamma^{2 h})) \log [\gamma]^4) / \\
& (16 a^4 B (-1+e^{2 a h}) (1+e^{2 a h}) (1-e^{4 a h})^3 (1+e^{4 a h}) \\
& (1+ \\
& e^{2 a h}+ \\
& e^{4 a h}))
\end{aligned}$$

$$\begin{aligned}
 & \frac{h (h - T)^2 \text{Log}[\gamma]^4}{1} + \\
 & \frac{2 (2 a + \text{Log}[\gamma])}{\left(-4 \right.} \\
 & \quad \left. \theta + \right. \\
 & \quad \left. \frac{1}{a^2 (-1 + e^{2 a h})^2 (1 + e^{2 a h}) (h - T) \text{Log}[\gamma]^2} \right. \\
 & \quad \alpha \\
 & \quad \sigma^4 \\
 & \quad \left(e^{-2 a (h+T)} \right. \\
 & \quad \quad (1 - e^{2 a h}) \\
 & \quad \quad \theta \\
 & \quad \quad \left(4 a^2 e^{2 a (h+T)} (-1 + e^{4 a h}) (h - T) (-1 + \gamma^h) + \right. \\
 & \quad \quad \quad 2 a e^{2 a T} (1 + e^{2 a h}) \\
 & \quad \quad \quad \left(e^{2 a (h+T)} h \gamma^h + e^{2 a T} h (-2 + \gamma^h) + e^{4 a h} (h (-2 + \gamma^h) - 2 T (-1 + \gamma^h)) + \right. \\
 & \quad \quad \quad \quad e^{2 a h} (h (4 - 3 \gamma^h) + 2 T (-1 + \gamma^h)) \left. \right) \text{Log}[\gamma] + \\
 & \quad \quad \quad e^{2 a (-h+T)} (3 e^{4 a T} h + 5 e^{2 a (3 h+T)} h \gamma^h - 3 e^{2 a (h+2 T)} h \gamma^h + 2 e^{10 a h} (h - T) \gamma^h + \\
 & \quad \quad \quad e^{2 a (h+T)} h (-6 + \gamma^h) - e^{4 a h} (2 h - T) (-3 + \gamma^h) + 6 e^{2 a (2 h+T)} h (-1 + \gamma^h) - \\
 & \quad \quad \quad e^{8 a h} (3 h - 3 T + (4 h + T) \gamma^h) + e^{6 a h} (2 T \gamma^h + h (6 - 5 \gamma^h)) \left. \right) \text{Log}[\gamma]^2 - \\
 & \quad \quad h \text{Log}[\gamma] (3 (-1 + e^{2 a h}) (-1 + e^{4 a (-h+T)}) h \text{Log}[\gamma] - 2 (-1 + e^{4 a h}) \\
 & \quad \quad \quad (-1 + e^{2 a (-h+T)}) h (a + 3 \text{Log}[\gamma]) - \\
 & \quad \quad \quad \left. \left. \left. (-1 + e^{2 a h})^2 (1 + e^{2 a h}) (h - T) (2 a + 3 \text{Log}[\gamma]) \right) \right) \right) \right)
 \end{aligned}$$