

ContourPlot[0.4 * n * (0.7 * (log2(100 * n^1.5) - x) + 1) == 2^x, {n, 1000, 1000000000}, {x, 5, 35}]

Input interpretation:

contour plot

$$0.4 n (0.7 (\log_2(100 n^{1.5}) - x) + 1) = 2^x$$

Contour plot:

