$$\text{root} = -\tfrac{5}{8}\log_2\left(\tfrac{5}{8}\right) - \tfrac{3}{8}\log_2\left(\tfrac{3}{8}\right) = 0.9544$$

Headache

$$y = -\left(\tfrac{3}{3}\log_2\left(\tfrac{3}{3}\right) + 0\log_2 0\right) = 0$$

$$N = -\left(\tfrac{2}{5}\log_2\left(\tfrac{2}{5}\right) + \tfrac{3}{5}\log_2\left(\tfrac{3}{5}\right)\right) = 0.9710$$

$$\text{root} = \left(\tfrac{3}{8} \times (0) + \tfrac{5}{8} \times 0.9710\right) = 0.3475$$

Spots

$$y = -\left(\tfrac{4}{5}\log_2\left(\tfrac{4}{5}\right) + \tfrac{1}{5}\log_2\left(\tfrac{1}{5}\right)\right) = 0.7219$$

$$N = -\left(\tfrac{1}{3}\log_2 \tfrac{1}{3} + \tfrac{2}{3}\log_2 \tfrac{2}{3}\right) = 0.9183$$

$$\text{root} - \left(\tfrac{5}{8} \times 0.7219 + \tfrac{3}{8} \times 0.9183\right) = 0.1589$$

Stidd

$$y = -\left(\tfrac{4}{5}\log_2\left(\tfrac{4}{5}\right) + \tfrac{1}{5}\log_2\left(\tfrac{1}{5}\right)\right) = 0.7219$$

$$N = -\left(\tfrac{1}{3}\log_2 \tfrac{1}{3} + \tfrac{2}{3}\log_2 \tfrac{2}{3}\right) = 0.9183$$

$$\text{root} - \left(\tfrac{5}{8} \times 0.7219 + \tfrac{3}{8} \times 0.9183\right) = 0.1589$$

Split on headache