

$Q_{ab}(x_r)$ = achromatic receptor response

$$Q_{ab}(x_r) = \frac{b}{\ln \sqrt{2}} \ln \left[1 + \frac{1}{1 + \sqrt{2} 10^{x_r/a}} \right] - b$$

$$10^{x_r} = e^{\ln(10) x_r}, \quad 10^{x_r/\ln(10)} = e^{x_r}$$

$a = 0,50, \quad b = 1,00, \quad e = 2,718282$
 $a' = a \ln(10) = 1,151$
 $10^{x_r/a'} = 10^{x_r / [a \ln(10)]} = e^{x_r/a}$

