log (L^*/L^*_u) CIELAB-Helligkeit L^* normiert für die UmgebungsHelligkeit L^*_u

L^*/L^*_u

$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=18, s=116,0, n=1/3, d=16,0) [1a]

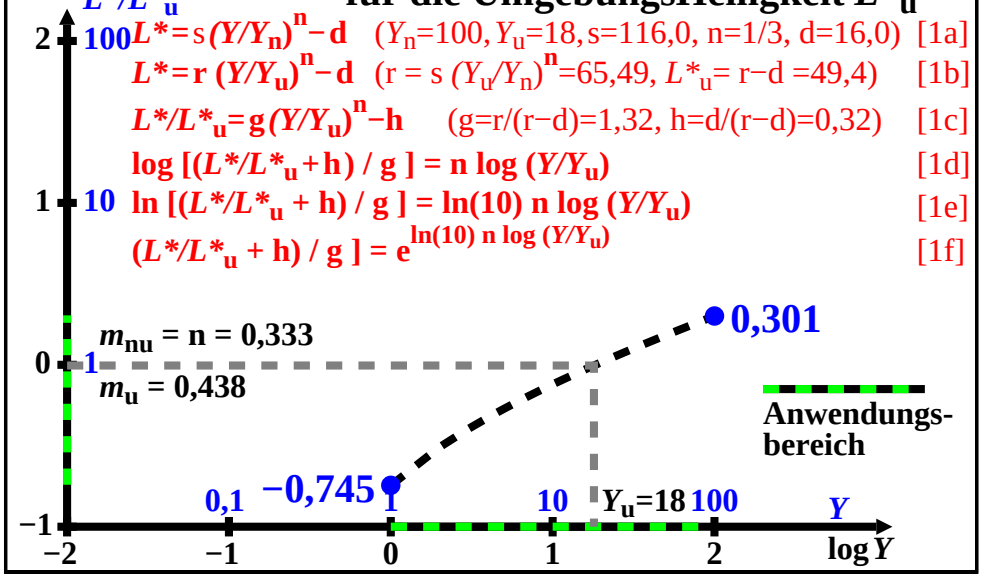
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=65,49, L^*_u= r−d =49,4) [1b]

$L^*/L^*_u = g\,(Y/Y_u)^n - h$ (g=r/(r−d)=1,32, h=d/(r−d)=0,32) [1c]

$\log[(L^*/L^*_u + h)/g] = n \log(Y/Y_u)$ [1d]

$\ln[(L^*/L^*_u + h)/g] = \ln(10)\, n \log(Y/Y_u)$ [1e]

$(L^*/L^*_u + h)/g] = e^{\ln(10)\, n \log(Y/Y_u)}$ [1f]



hgp70−5a

log ($\Delta Y/\Delta Y_u$) CIELAB-Normfarbwertdifferenz ΔY normiert für ΔY_u

$\Delta Y/\Delta Y_u$

$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=18, s=116,0, n=1/3, d=16,0) [1a]

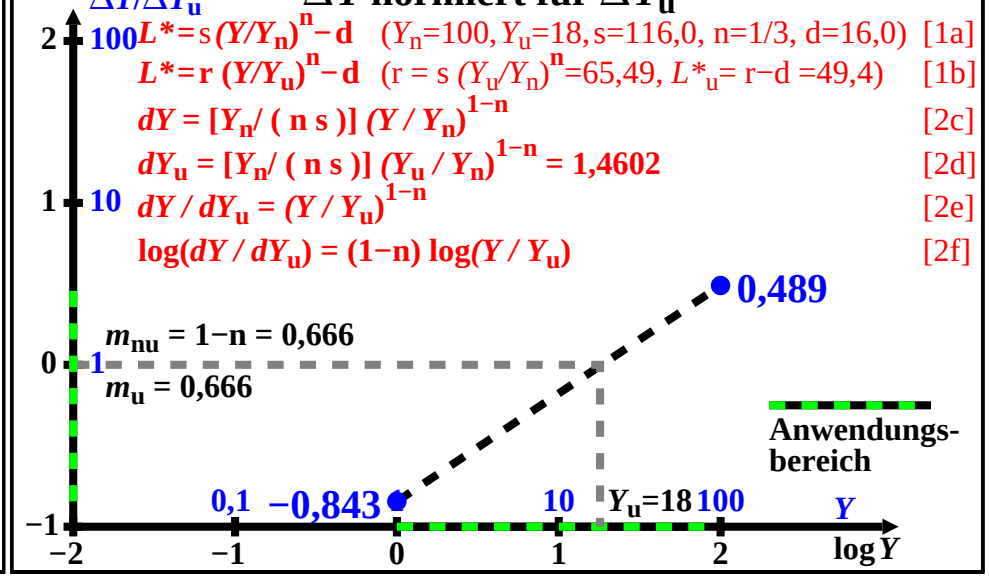
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=65,49, L^*_u= r−d =49,4) [1b]

$dY = [Y_n/(n\,s)]\,(Y/Y_n)^{1-n}$ [2c]

$dY_u = [Y_n/(n\,s)]\,(Y_u/Y_n)^{1-n} = 1{,}4602$ [2d]

$dY/dY_u = (Y/Y_u)^{1-n}$ [2e]

$\log(dY/dY_u) = (1-n)\log(Y/Y_u)$ [2f]



hgp70−6a

log [($\Delta Y/Y$) / ($\Delta Y/Y$)$_u$] CIELAB-Y-Empfindlichkeit normiert für ($\Delta Y/Y$)$_u$

$S_r/S_{ru} = (\Delta Y/Y)/(\Delta Y/Y)_u$

$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=18, s=116,0, n=1/3, d=16,0) [1a]

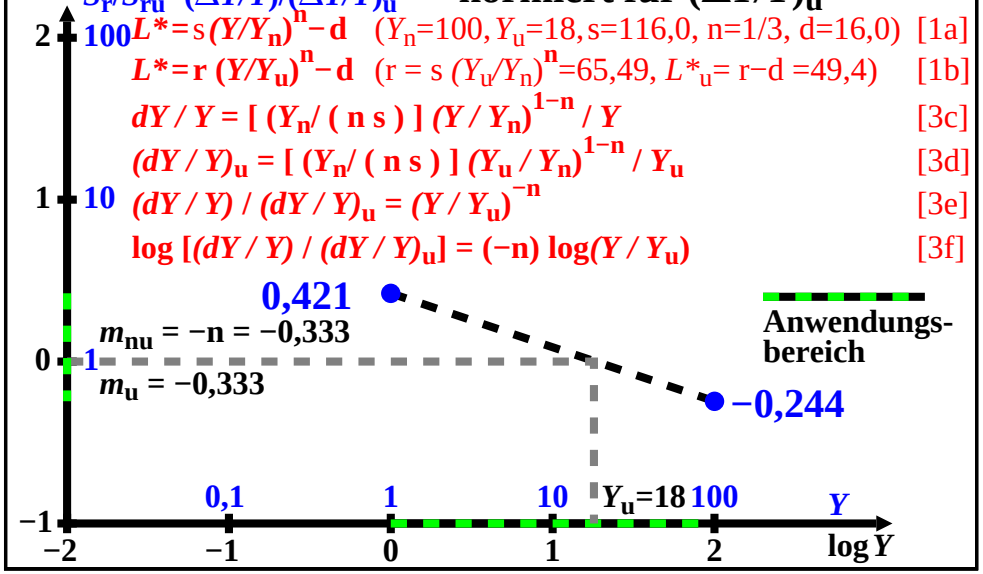
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=65,49, L^*_u= r−d =49,4) [1b]

$dY/Y = [(Y_n/(n\,s)]\,(Y/Y_n)^{1-n}/Y$ [3c]

$(dY/Y)_u = [(Y_n/(n\,s)]\,(Y_u/Y_n)^{1-n}/Y_u$ [3d]

$(dY/Y)/(dY/Y)_u = (Y/Y_u)^{-n}$ [3e]

$\log[(dY/Y)/(dY/Y)_u] = (-n)\log(Y/Y_u)$ [3f]



hgp70−7a

log[($Y/\Delta Y$) / ($Y/\Delta Y$)$_u$)] CIELAB-Y-Kontrast normiert für ($Y/\Delta Y$)$_u$

$C_r/C_{ru} = (Y/\Delta Y)/(Y/\Delta Y)_u$

$L^* = s\,(Y/Y_n)^n - d$ (Y_n=100, Y_u=18, s=116,0, n=1/3, d=16,0) [1a]

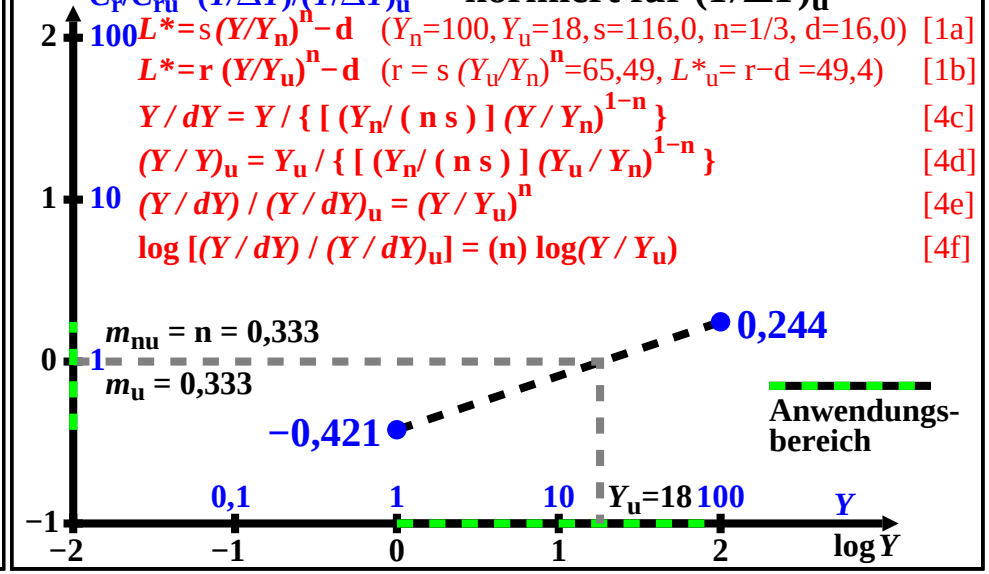
$L^* = r\,(Y/Y_u)^n - d$ (r = s $(Y_u/Y_n)^n$=65,49, L^*_u= r−d =49,4) [1b]

$Y/dY = Y/\{[(Y_n/(n\,s)]\,(Y/Y_n)^{1-n}\}$ [4c]

$(Y/Y)_u = Y_u/\{[(Y_n/(n\,s)]\,(Y_u/Y_n)^{1-n}\}$ [4d]

$(Y/dY)/(Y/dY)_u = (Y/Y_u)^n$ [4e]

$\log[(Y/dY)/(Y/dY)_u] = (n)\log(Y/Y_u)$ [4f]



hgp70−8a

hgp70−7n