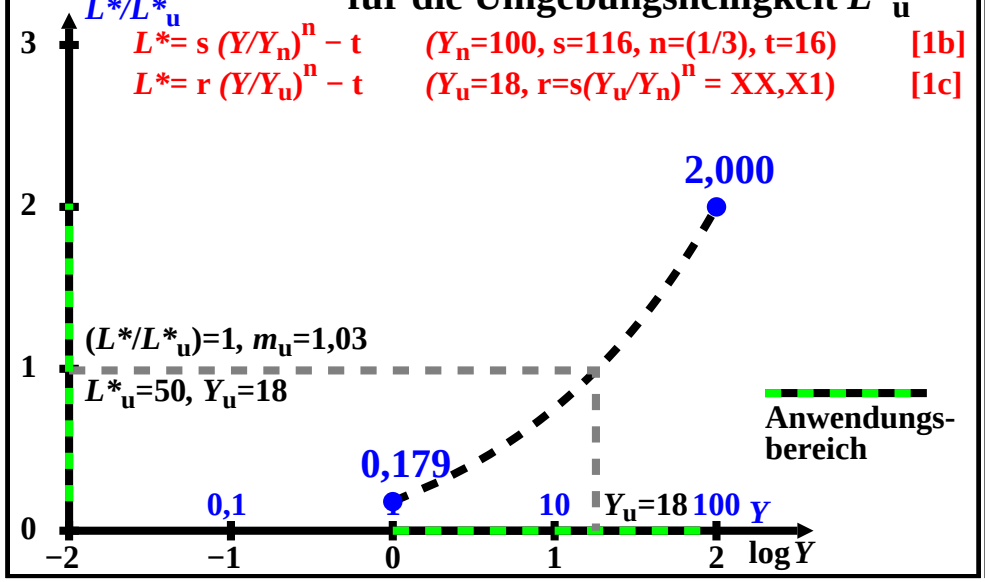
L^*/L^*_u CIELAB Helligkeit L^* normiert für die Umgebungshelligkeit L^*_u

L^*/L^*_u

$L^* = s\,(Y/Y_n)^n - t$ (Y_n=100, s=116, n=(1/3), t=16) [1b]

$L^* = r\,(Y/Y_u)^n - t$ (Y_u=18, r=s$(Y_u/Y_n)^n$ = XX,X1) [1c]



hgc51−1a

$\Delta Y/\Delta Y_u$ CIE-Normfarbwertdifferenz ΔY normiert für ΔY_u

$\Delta Y/\Delta Y_u$

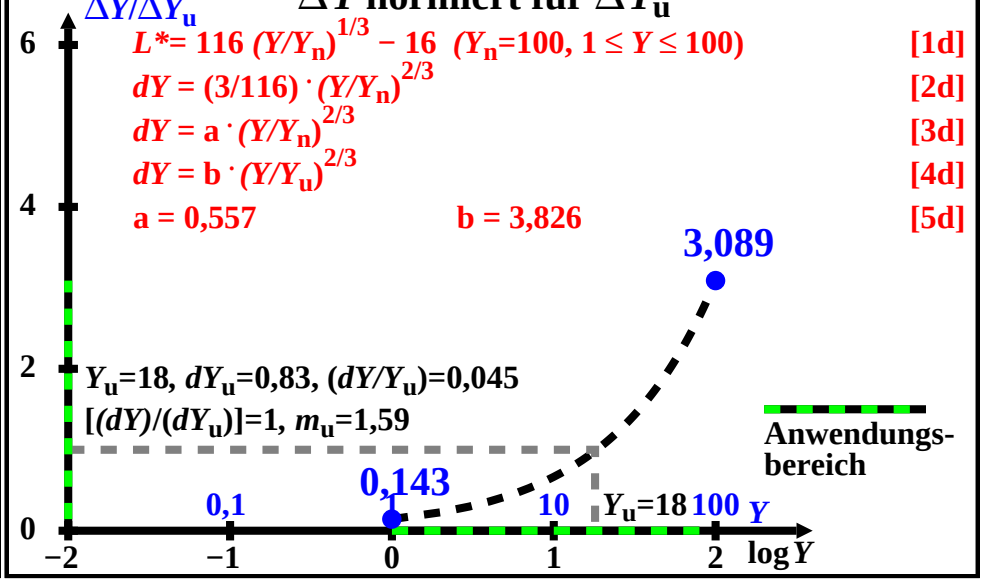
$L^* = 116\,(Y/Y_n)^{1/3} - 16$ (Y_n=100, $1 \le Y \le 100$) [1d]

$dY = (3/116)\cdot(Y/Y_n)^{2/3}$ [2d]

$dY = a\cdot(Y/Y_n)^{2/3}$ [3d]

$dY = b\cdot(Y/Y_u)^{2/3}$ [4d]

a = 0,557 b = 3,826 [5d]



hgc51−2a

$(\Delta Y/Y) / (\Delta Y/Y)_u$ CIE Y-Empfindlichkeit normiert für $\Delta Y_u/Y_u$

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

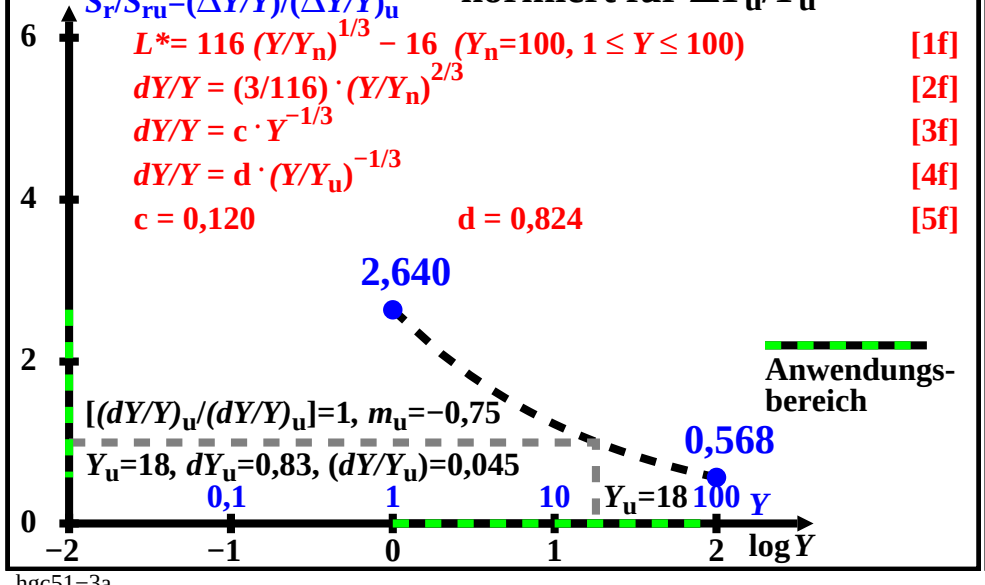
$L^* = 116\,(Y/Y_n)^{1/3} - 16$ (Y_n=100, $1 \le Y \le 100$) [1f]

$dY/Y = (3/116)\cdot(Y/Y_n)^{2/3}$ [2f]

$dY/Y = c\cdot Y^{-1/3}$ [3f]

$dY/Y = d\cdot(Y/Y_u)^{-1/3}$ [4f]

c = 0,120 d = 0,824 [5f]



hgc51−3a

hgc51−3n

$(Y/\Delta Y) / (Y/\Delta Y)_u$ CIE Y-Kontrast normiert für $Y_u/\Delta Y_u$

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

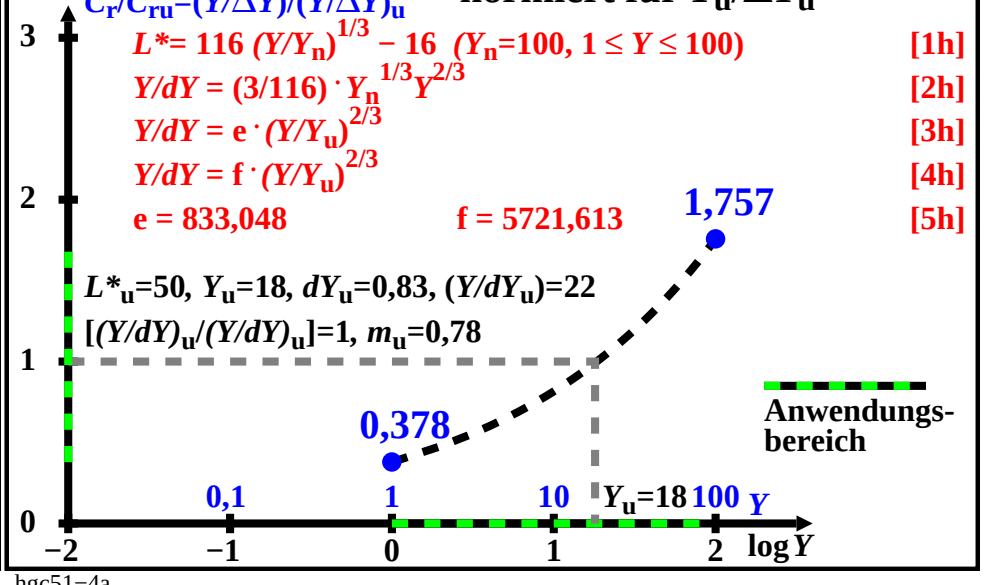
$L^* = 116\,(Y/Y_n)^{1/3} - 16$ (Y_n=100, $1 \le Y \le 100$) [1h]

$Y/dY = (3/116)\cdot Y_n^{1/3} Y^{2/3}$ [2h]

$Y/dY = e\cdot(Y/Y_u)^{2/3}$ [3h]

$Y/dY = f\cdot(Y/Y_u)^{2/3}$ [4h]

e = 833,048 f = 5721,613 [5h]



hgc51−4a