

Hexagon colour metric based on 3 elementary colours RGB^*_3



$0 \leq R^*_3, G^*_3, B^*_3, C^*_{RGB}, T^* \leq 77$ for standard device NRS18
 Triangle coordinates RGB^*_3 with hue angles 30, 150, 270 degree
 $X = RJGC'BM'$

chroma

$$C^*_{RGB} = \max(R^*_3, G^*_3, B^*_3) - \min(R^*_3, G^*_3, B^*_3)$$

blackness

$$N^*_{RGB} = 1 - \max(R^*_3, G^*_3, B^*_3)$$

triangle
lightness

$$T^*_{RGB} = 1 - N^*_{RGB} - 0,5 C^*_{RGB}$$

RG-chroma

$$A^*_{RGB} = \cos(30)R^*_3 + \cos(150)G^*_3$$

JB-chroma

$$B^*_{RGB} = \sin(30)R^*_3 + \sin(150)G^*_3 + \sin(270)B^*_3$$

hue
angle

$$H^*_{RGB} = \text{atan} [B^*_{RGB} / A^*_{RGB}]$$