?

$$X = \int_{380}^{780} I(\lambda) * x(\lambda) \mathrm{d}\lambda Y = \int_{380}^{780} I(\lambda) * y(\lambda) \mathrm{d}\lambda Z = \int_{380}^{780} I(\lambda) * z(\lambda) \mathrm{d}\lambda \tag{1}$$

$_{w}aves$
$X+$
$Y+$
$Z =$
$const$

$$x = \frac{X}{X+Y+Z} y = \frac{Y}{X+Y+Z} z = \frac{Z}{X+Y+Z} \tag{2}$$

$_{d}iagram$
$_{r}epresentation RGB$
$_{l}imitations$

??
$_{r}epresentation_{c}ylindric$
$_{r}epresentation_{c}one$

$$Y = K_R * R + (1 - K_R - K_B) * G + K_B * BCb = \frac{1}{2} * \frac{B-Y}{1-K_B} Cr = \frac{1}{2} * \frac{R-Y}{1-K_R} \tag{3}$$

R, G, B
K_R, K_B
$_{r}epresentation CbCrY = 0.5$
$[0, 1]$
$[0, ..., 255]$
$_{s}quare$
$_{d}isk$
$_{d}iamond$
$_{r}ectangle$
$_{g}auss$
??
??
??
??
??
?

$$A \ominus B = z \in E | B_z \subseteq A \tag{4}$$

$_{b}efore$
$_{a}fter$

$$A \oplus B = z \in E | B_z^{\delta} \cap A \neq \emptyset \tag{5}$$

$_{b}efore$
$_{a}fter$

$$A \circ B = (A \ominus B) \oplus B \tag{6}$$

$$A \bullet B = (A \oplus B) \ominus B \tag{7}$$

$$A_s = a + s | a \in A, \forall s \in E \tag{8}$$

A
$m\times$
n
K
$a\times$
b
(c_1, c_2)

$$R_{i,j} = \sum_{x=1}^{a} \sum_{y=1}^{b} A_{i-c_1+x, j-c_2+y} * K_{x,y}, i = 1..m, j = 1..n \tag{9}$$

$_{c}onvolution_{e}xample$
??
??
A
$m+$
$2a\times$
$n+$
$2b$
$_{f}ilter_{r}epresentation Boxfilter$

$$G_{x,y} = Ae^{\frac{-(x-\mu_x)^2}{2\sigma_x^2} + \frac{-(y-\mu_y)^2}{2\sigma_y^2}} \tag{10}$$

??
??