

## Line-element examples for grey samples ( $0, 2 \leq Y_r \leq 5$ )

$F(Y_r)$  is called the line-element function of  $f(Y_r)$ .

The following relations are valid for  $Y_r = Y/Y_u = Y/18$ :

$$\frac{d[F(Y_r)]}{dY_r} = f(Y_r) \quad [1]$$

$$F(Y_r) = \int \frac{f'(Y_r)}{f(Y_r)} dY_r \quad [2]$$

Example for the normalized tristimulus value  $Y_r = Y/Y_u$ :

$$\frac{d[a \ln(1 + b Y_r)]}{dY_r} = \frac{a b}{1 + b Y_r} \quad [3]$$

$$a \ln(1 + b Y_r) = \int \frac{a b}{1 + b Y_r} dY_r \quad [4]$$