

**Supplement 3. Establishing Equality in v Expressions. 31 |**

The terms in (16) may be modified by modifying parameters,  $\mu$ 's, subscripted by  $\epsilon$  (epsilon), for  $V$  (for example for magnification necessary to see projected information at the back of a hall or improvements with greater resolution); or  $\alpha$  for  $A$ ; or  $\chi$  for  $m$ . See (22)-(26) to calculate one of these modifier's ( $\mu$  subscripted by  $\epsilon$ ). Maybe the principal of the eye chart used to determine 20/20 (or better or worse) vision may be used with magnification provided by MS Word.

$$(22) \quad c = (b + m + \omega), \quad V = \mu_\epsilon \left[ \frac{(\mu_\alpha A - \mu_\chi c)}{(\mu_\alpha A)} \right] \cdot \left( \frac{t}{T} \right)$$

$$(23) \quad c = c_{(pntW)}, \quad A = A_{(pntW)}, \quad V_{(pntW)} \approx \left[ \frac{(A - c)}{A} \right] \cdot \left( \frac{t}{T} \right)$$

Suppose that a  $V_{(pntW)}$  in (23) with its  $A$  of text can be made an equation by finding a  $\mu_\epsilon$  for an end page of a chapter end. Suppose that interlinear space is the standard 6 points is already in  $\omega$ . The border for  $W$  and margins have already been calculated and  $b$  and  $m$  are set for them, and the  $c$  for blank lines at the bottom needs to be added to  $\omega$ . Standard 12 point text is used, so line height is 1/4 inch with 6 point interlinear space. The simplest way to do this would be to replace  $\omega$  with  $(\omega + \omega_{bottom})$  and recalculate. Or:

Let:

$\omega_{bottom}$  = number of blank lines at the bottom of a chapter last page

$L$  = number of lines of text possible in  $A$

$\lambda$  = number of actual lines of text  $a_w$  = width of a  $c_{(pntW)}$

This example does not consider an orphan with less than a line length as the last line.

Notice that the interlinear space below the last line of text is not necessary. So:

$$\begin{aligned} \omega_{bottom} &= (L - \lambda) \text{ lines} / L \text{ lines} \times 1\text{in}/4 \times a_w \text{ in} + 6/72 \text{ in} \times a_w \\ &= [(L - \lambda) \times 1 \times 78] / (L \times 4 \times 72) = 78 (L - \lambda) / 288L = 39(L - \lambda) / 144L \end{aligned}$$

Units are in  $\text{in}^2$ .

$$(24) \quad c'_{(pntW)} = [b + m + \omega + \omega_{(bottom)}]$$

$$(25) \quad A = A_{(pntW)}, \quad c = c_{(pntW)}, \quad \mu_\epsilon = \frac{(A - c')}{(A - c)}$$

where  $c$  is the clutter with the whole  $A$  to be filled with the same kind of text, and (25) is for a new  $V_{(pntW)}$  in a true expression of equality with an = instead of a  $\approx$  as the assignment operator:

$$(26) \quad c = c_{(pntW)}, \quad A = A_{(pntW)}, \quad V_{(pntW)} = \mu_\epsilon \left[ \frac{(A - c)}{A} \right] \cdot \left( \frac{t}{T} \right)$$

How could  $\mu_\chi$  be formulated to achieve this equality?