

$$\frac{l}{h} = 2.3 \left(\frac{v^2}{2h} \right)^{0.3}$$

$v = \text{m/sec}$
 $l = \text{stride length}$
 $h = \text{hip height}$
 $g = 9.8 \text{ m/sec}^2$

Calculations by Helfenstine...

Using Hastings value of $h = 1.5 \text{ meters}$

$$l = \frac{253 + 257 + 245}{3} = 252.3 \text{ meters} = 2.52 \text{ meters}$$

$$g = 9.8 \text{ m/sec}^2$$

$$v = 4 \text{ mph} \cong \frac{5280 \times 4}{1609} = 13.12 \text{ m/sec}$$

$$3 \text{ mph} = 1.32 \text{ mph}$$

$$\frac{l}{h} = \left(\frac{K}{2.3} \right) \left(\frac{v^2}{2h} \right)^{0.3}$$

$$\frac{\left(\frac{2.52}{1.5} \right)}{\left(\frac{1.76^2 \cdot 0.3}{9.6 \times 1.5} \right)} = K = \frac{1.68}{(1.215)^{0.3} \cdot 1.6305} = 2.66$$

$$\frac{1.68}{(1.215)^{0.3} \cdot 1.53} = K = 3.16$$

- $(1.215)^3 = .5$
- $= .4$
- $.45$
- $.55$
- $.6$

- $K = 3.36$
- $K = 4.2$
- $K = 3.73$
- $K = 3.05$
- $K = 2.8$

- $(1.21)^3 \quad K =$
- $.2 \quad 8.1$
- $.25$
- $.3 \quad 5.6$
- $.35$

