



(B)

$$\frac{\phi_{\text{peri}}}{\phi_{\text{mem}}} = \frac{12}{\pi(3\alpha - 1)} \frac{m_{\text{peri}}}{\rho_{\text{prot}} \phi_{\text{mem}}^* w^3}$$

constant per-cell periplasmic protein mass

constant average aspect ratio

constant allocation toward membrane proteins

