

$$\begin{aligned}
& \int_0^\pi d\theta \int_0^{2\pi} r^2 \sin(\theta) d\phi \\
& \int_0^\pi d\theta \int_0^{2\pi} \sin(\theta) \left( \frac{1}{5} \sin(\theta m) \sin(n\phi) + 1 \right)^2 d\phi \\
& \frac{4 \sin(\pi m) \sin^2(\pi n)}{5n - 5m^2 n} - \\
& \frac{(8m^2 + \cos(2\pi m) - 1) \sin(4\pi n)}{200(4m^2 - 1)n} + \\
& \frac{\pi(8m^2 + \cos(2\pi m) - 1)}{50(4m^2 - 1)} + \\
& \frac{4\pi}{\left( \frac{8m^2}{50(4m^2 - 1)} + 4 \right) \pi} \\
& picture/picture.jpg \\
& \sin \alpha - \\
& \sin \beta = \\
& 2 \cos \frac{\alpha + \beta}{2} \sin \frac{\alpha - \beta}{2} \\
& \sin \sqrt{x+k} - \\
& \sin \sqrt{x} = \\
& 2 \cos \frac{\sqrt{x+k} + \sqrt{x}}{2} \sin \frac{\sqrt{x+k} - \sqrt{x}}{2} \\
& \lim_{x \rightarrow +\infty} \sin \sqrt{x+k} - \sin \sqrt{x} = \\
& \lim_{x \rightarrow +\infty} 2 \cos \frac{\sqrt{x+k} + \sqrt{x}}{2} \sin \frac{\sqrt{x+k} - \sqrt{x}}{2} \\
& = \\
& \lim_{x \rightarrow +\infty} \cos \frac{\sqrt{x+k} + \sqrt{x}}{2} (\sqrt{x+k} - \sqrt{x}) \\
& \lim_{x \rightarrow +\infty} \sqrt{x+k} - \sqrt{x} = \\
& 0, \\
& 0 \left| \cos \frac{\sqrt{x+k} + \sqrt{x}}{2} \right| 1 \\
& \lim_{x \rightarrow +\infty} \sin \sqrt{x+k} - \sin \sqrt{x} = \\
& \lim_{x \rightarrow +\infty} \cos \frac{\sqrt{x+k} + \sqrt{x}}{2} (\sqrt{x+k} - \sqrt{x}) = \\
& 0 \\
& a_k = \{ b_1 - b_n k = 1, b_k - b_{k-1} 2kn \\
& \sum_{k=1}^n a_k = \\
& 0 b_0 = \\
& b_n \\
& \lim_{x \rightarrow +\infty} \sum_{k=1}^n a_k \sin \sqrt{x+k} = \\
& \lim_{x \rightarrow +\infty} \sum_{k=1}^n b_k - b_{k-1} \sin \sqrt{x+k} \\
& = \\
& \lim_{x \rightarrow +\infty} - \sum_{k=1}^{n-1} b_i (\sin \sqrt{x+k+1} - \sin \sqrt{x+k}) - b_n (\sin \sqrt{x+1} - \sin \sqrt{x+k}) \\
& \lim_{x \rightarrow +\infty} \sin \sqrt{x+k} - \sin \sqrt{x} = \\
& 0 \\
& \lim_{x \rightarrow +\infty} \sum_{k=1}^n \sin \sqrt{x+k} = \\
& 0
\end{aligned}$$