$$\sum_{i=0}^{n-2} \sum_{j=i+1}^{n-1} \sum_{k=1}^{n} 1 = -\frac{n^2}{2} + \frac{n^3}{2} \sim = \frac{1}{2} n^3$$

$$g\left(\frac{1}{2} n^3\right) \in O\left(g\left(n^3\right)\right)$$