

$$R_{hv}(i, j) = \frac{i(i+1)}{2} \times \frac{j(j+1)}{2}$$

$$SumR_{hv}(i, j) = \frac{i(i+1)(i+2)}{6} \times \frac{j(j+1)(j+2)}{6}$$

$$i \leq j \quad R_{diag}(i, j) = \frac{i(i-1)(4i^2+4i+3)}{6} + (j-i) \times \frac{i(4i^2-1)}{3}$$

$$\begin{aligned} i \leq j \quad SumR_{diag}(i, j) &= \frac{i(i-1)(2i^4+8i^3+13i^2+8i+1)}{30} \\ &+ (j-i) \times \frac{i(i-1)(3i^3+8i^2+8i+3)}{15} \\ &+ \frac{(j-i)(j-i+1)}{2} \times \frac{i(2i^3+4i^2+i-1)}{6} \end{aligned}$$

The answer is

$$SumR_{hv}(43, 47) + SumR_{diag}(43, 47)$$