Step-1

4764-1.6-15P AID: 124

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(a) In a symmetric matrix, the opposite elements to the main diagonal are equal.

$$n(n+1)$$

If the order of the matrix is n then the number of entries to be chosen is $\frac{1}{2}$ on and above diagonal.

Step-2

(b) In a skew symmetric matrix, the opposite elements to the main diagonal are additive inverse to each other

$$\frac{n(n-1)}{n}$$

If the order of the matrices is n then the number of entries to be chosen is $\frac{1}{2}$ on and above diagonal.