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0.1 Tensor inverses

For second order tensors we have:

- T_j^i
- T_{ij}
- T^{ij}

For each of these we can define an inverse:

- $T_i^j U_j^k = \delta_i^k$
- $T_{ij} U^{jk} = \delta_i^k$
- $T^{ij} U_{jk} = \delta_i^k$

0.1.1 Notation for inverses

If we have $T_{ij} U^{jk} = \delta_i^k$, we can instead write:

$$T_{ij} T^{jk} = \delta_i^k$$