

Diagrammatic equation showing the contraction of two vertices:

The left side consists of two vertices connected by a dot ( $\bullet$ ).

The first vertex (left) has external legs labeled  $d, \beta, b, a, \alpha, c$  and an internal label  $x$ .

The second vertex (right) has external legs labeled  $h, \nu, f, e, \mu, g$  and an internal label  $y$ .

The right side of the equation is the product of two Kronecker deltas,  $\delta_b^h \delta_a^g$ , multiplied by a diagram where the legs  $b$  and  $a$  of the first vertex are contracted with the legs  $h$  and  $g$  of the second vertex, respectively. The resulting diagram has external legs  $d, f, e, c$  and internal labels  $x$  and  $y$ .

$$\begin{array}{c} d \\ \beta \\ b \\ a \\ \alpha \\ c \end{array} \bullet \begin{array}{c} h \\ \nu \\ f \\ e \\ \mu \\ g \end{array} = \delta_b^h \delta_a^g \begin{array}{c} d \\ x \\ f \\ y \\ e \\ c \end{array}$$