

$\mathcal{A} / : \alpha \times \mathcal{A}[is_, os_, cs_, w_] := \mathcal{A}[is_, os_, cs_, \text{Expand}[\alpha w]]$

$\mathcal{A} / : \mathcal{A}[is1_, os1_, cs1_, w1_] + \mathcal{A}[is2_, os2_, cs2_, w2_] /;$

$(\text{Sort}@is1 = \text{Sort}@is2) \wedge (\text{Sort}@os1 = \text{Sort}@os2) \wedge$

$(\text{Sort}@Normal@cs1 = \text{Sort}@Normal@cs2) := \mathcal{A}[is1_, os1_, cs1_, w1 + w2]$