

The δ relations

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Problem, Describe "a thing whose quotient is $S^2 \times S^2$!"

```
In[14]:= MM[expr_] // S := expr /. {
  1 δaa[f_, i_, j_, k_, l_] /; !OQ[j, l] => δaa[Simp[f], k, l, i, j],
  2 δaa[f_, i_, j_, k_, l_] /; !OQ[i, k] & DQ[j, l] & OQ[j, l] =>
    δaa[Simp@f, i, l, k, j] + ca[Simp[b_x f], l, i, j] + ca[Simp[-b_i f], l, k, j] +
    ca[Simp[-b_x f], j, i, l] + ca[Simp[b_i f], j, k, l],
  3 δaa[f_, i_, k_, j_, k_] /; !OQ[i, j] =>
    δaa[Simp@f, j, k, i, k] + δa[Simp[-b_i f], j, k] + δa[Simp[b_j f], i, k]
};
```

