

```
{\mu,\nu,\rho}::Indices(vector).
```

Assigning list property Indices to `\mu`, `\nu`, `\rho`.

In many applications one encounters inner products of vectors, such as in the expression below:

```
A^{\mu} \epsilon_{\mu} \epsilon_{\nu} B^{\nu};
```

$$1 := A^{\mu} \epsilon_{\mu} \epsilon_{\nu} B^{\nu};$$

It is often useful to write these using a more compact “dot” notation, eliminating the contracting indices. We can do this in Cadabra by making use of the “`\cdot`” operator together with a standard substitution rule:

```
@substitute!!(%)( B?_{\mu} A?^{\mu} -> \cdot(B?)(A?) );
```

$$1 := \epsilon \cdot A \epsilon \cdot B;$$

A similar substitution rule brings us back to the form with explicit indices:

```
@substitute!!(%)( \cdot(A?)(B?) -> A?_{\mu} B?^{\mu} );
```

$$1 := \epsilon_{\mu} A^{\mu} \epsilon_{\nu} B^{\nu};$$