

<< KnotTheory`

Loading KnotTheory` version of April 20, 2009, 14:18:34.482.

Read more at <http://katlas.org/wiki/KnotTheory>.

```
MVA[K_] := Expand[Simplify[
  (MultivariableAlexander[K][t] /. t[1] → t) * (t^(1/2) - t^(-1/2))
]]
```

```
MVA /@ AllKnots[{3, 7}] /. t[1] → t
```

$$\left\{ -1 + \frac{1}{t} + t, 3 - \frac{1}{t} - t, 1 + \frac{1}{t^2} - \frac{1}{t} - t + t^2, -3 + \frac{2}{t} + 2t, 5 - \frac{2}{t} - 2t, -3 - \frac{1}{t^2} + \frac{3}{t} + 3t - t^2, \right. \\ \left. 5 + \frac{1}{t^2} - \frac{3}{t} - 3t + t^2, -1 + \frac{1}{t^3} - \frac{1}{t^2} + \frac{1}{t} + t - t^2 + t^3, -5 + \frac{3}{t} + 3t, 3 + \frac{2}{t^2} - \frac{3}{t} - 3t + 2t^2, \right. \\ \left. -7 + \frac{4}{t} + 4t, 5 + \frac{2}{t^2} - \frac{4}{t} - 4t + 2t^2, -7 - \frac{1}{t^2} + \frac{5}{t} + 5t - t^2, 9 + \frac{1}{t^2} - \frac{5}{t} - 5t + t^2 \right\}$$

```
Alexander[#][t] & /@ AllKnots[{3, 7}]
```

$$\left\{ -1 + \frac{1}{t} + t, 3 - \frac{1}{t} - t, 1 + \frac{1}{t^2} - \frac{1}{t} - t + t^2, -3 + \frac{2}{t} + 2t, 5 - \frac{2}{t} - 2t, -3 - \frac{1}{t^2} + \frac{3}{t} + 3t - t^2, \right. \\ \left. 5 + \frac{1}{t^2} - \frac{3}{t} - 3t + t^2, -1 + \frac{1}{t^3} - \frac{1}{t^2} + \frac{1}{t} + t - t^2 + t^3, -5 + \frac{3}{t} + 3t, 3 + \frac{2}{t^2} - \frac{3}{t} - 3t + 2t^2, \right. \\ \left. -7 + \frac{4}{t} + 4t, 5 + \frac{2}{t^2} - \frac{4}{t} - 4t + 2t^2, -7 - \frac{1}{t^2} + \frac{5}{t} + 5t - t^2, 9 + \frac{1}{t^2} - \frac{5}{t} - 5t + t^2 \right\}$$

```
(MVA[#] == Alexander[#][t]) & /@ AllKnots[]
```

KnotTheory::loading: Loading precomputed data in DTCODE4KNOTS TO 11.

KnotTheory::credits:

The GaussCode to PD conversion was written by Siddarth Sankaran at the University of Toronto in the summer of 2005.

