Row 1:

$$\nabla(z) = 1 + z^2 + z^4$$
$$V(t) = 3 - t^{-3} + 2\,t^{-2} - 2\,t^{-1} - 2\,t + 2\,t^2 - t^3$$

$\xrightarrow{-\,\mapsto\,+}$

$$\nabla(z) = 1$$
$$V(t) = 1$$

$\xrightarrow{\text{III, II}}$

$$\nabla(z) = 1$$
$$V(t) = 1$$

$\xrightarrow{\text{II, I}}$

$$\nabla(z) = 1$$
$$V(t) = 1$$

$\downarrow -\,\mapsto\,0$

Row 2:

$$\nabla(z) = z + z^2$$
$$V(t) = (1+t^2)\times(1+t^2-t^3)\,t^{-3/2}$$

$\xrightarrow{+\,\mapsto\,0}$

$$\nabla(z) = -z^2$$
$$V(t) = (1+t^2)^2\,t^{-2}$$

$\xrightarrow{+\,\mapsto\,-}$

$$\nabla(z) = 0$$
$$V(t) = (1+t)\,(1+t^2)\,t^{-3}$$

$\xrightarrow{\text{II}}$

$$\nabla(z) = 0$$
$$V(t) = (1+t)\,(1+t^2)\,t^{-3}$$

$\downarrow +\,\mapsto\,-$ $\downarrow +\,\mapsto\,0$ $\swarrow 0\,\mapsto\,+$ $\downarrow 0\,\mapsto\,-$

Row 3:

$$\nabla(z) = z$$
$$V(t) = (1+t^2)\,t^{-5/2}$$

$$\nabla(z) = z$$
$$V(t) = (1+t^2)\,t^{-5/2}$$

$\xleftarrow{\text{isotopy}}$

$$\nabla(z) = z$$
$$V(t) = (1+t^2)\,t^{-5/2}$$

$\xleftarrow{\text{I, I}}$

$$\nabla(z) = z$$
$$V(t) = (1+t^2)\,t^{-5/2}$$

$\downarrow \text{II}$ $\downarrow \text{I}$

Row 4:

$$\nabla(z) = z$$
$$V(t) = (1+t^2)\,t^{-5/2}$$

$\xrightarrow{\text{I}}$

$$\nabla(z) = z$$
$$V(t) = (1+t^2)\,t^{-5/2}$$

$$\nabla(z) = 0$$
$$V(t) = (1+t)\,t^{-1/2}$$

$\xrightarrow{0\,\mapsto\,-}$

$$\nabla(z) = 1$$
$$V(t) = 1$$

$\swarrow -\,\mapsto\,0$ $\downarrow -\,\mapsto\,+$ $\nearrow \text{II}$ $\downarrow 0\,\mapsto\,+$ $\downarrow \text{I}$

Row 5:

$$\nabla(z) = 1$$
$$V(t) = 1$$

$$\nabla(z) = 0$$
$$V(t) = (1+t)\,t^{-1/2}$$

$$\nabla(z) = 1$$
$$V(t) = 1$$

$\xrightarrow{\text{I}}$

$$\nabla(z) = 1$$
$$V(t) = 1$$

Computing the Conway and Jones polynomials for the knot 6_3.

Figure from *Interactive Topological Drawing* (1998) by R. G. Scharein

www.pims.math.ca/knotplot/