

FINITE MULTIPLE ZETA VALUES

$$A = \zeta_{\mathcal{A}}(1, 2)$$

$$\begin{aligned}\zeta_{\mathcal{A}}(3) &= 0 \\ \zeta_{\mathcal{A}}(1, 2) &= A \\ \zeta_{\mathcal{A}}(2, 1) &= -A \\ \zeta_{\mathcal{A}}(1, 1, 1) &= 0\end{aligned}$$

$$A = \zeta_{\mathcal{A}}(1, 1, 3)$$

$$\begin{aligned}\zeta_{\mathcal{A}}(5) &= 0 \\ \zeta_{\mathcal{A}}(1, 4) &= 2A \\ \zeta_{\mathcal{A}}(2, 3) &= -4A \\ \zeta_{\mathcal{A}}(3, 2) &= 4A \\ \zeta_{\mathcal{A}}(4, 1) &= -2A \\ \zeta_{\mathcal{A}}(1, 1, 3) &= A \\ \zeta_{\mathcal{A}}(1, 2, 2) &= -3A \\ \zeta_{\mathcal{A}}(1, 3, 1) &= 0 \\ \zeta_{\mathcal{A}}(2, 1, 2) &= 0 \\ \zeta_{\mathcal{A}}(2, 2, 1) &= 3A \\ \zeta_{\mathcal{A}}(3, 1, 1) &= -A \\ \zeta_{\mathcal{A}}(1, 1, 1, 2) &= 2A \\ \zeta_{\mathcal{A}}(1, 1, 2, 1) &= -4A \\ \zeta_{\mathcal{A}}(1, 2, 1, 1) &= 4A \\ \zeta_{\mathcal{A}}(2, 1, 1, 1) &= -2A \\ \zeta_{\mathcal{A}}(1, 1, 1, 1, 1) &= 0\end{aligned}$$

$$A = \zeta_{\mathcal{A}}(1, 1, 4)$$

$$\begin{aligned} \zeta_{\mathcal{A}}(6) &= 0 \\ \zeta_{\mathcal{A}}(1, 5) &= 0 \\ \zeta_{\mathcal{A}}(2, 4) &= 0 \\ \zeta_{\mathcal{A}}(3, 3) &= 0 \\ \zeta_{\mathcal{A}}(4, 2) &= 0 \\ \zeta_{\mathcal{A}}(5, 1) &= 0 \\ \zeta_{\mathcal{A}}(1, 1, 4) &= A \\ \zeta_{\mathcal{A}}(1, 2, 3) &= -2A \\ \zeta_{\mathcal{A}}(1, 3, 2) &= 3A \\ \zeta_{\mathcal{A}}(1, 4, 1) &= -2A \\ \zeta_{\mathcal{A}}(2, 1, 3) &= -A \\ \zeta_{\mathcal{A}}(2, 2, 2) &= 0 \\ \zeta_{\mathcal{A}}(2, 3, 1) &= 3A \\ \zeta_{\mathcal{A}}(3, 1, 2) &= -A \\ \zeta_{\mathcal{A}}(3, 2, 1) &= -2A \\ \zeta_{\mathcal{A}}(4, 1, 1) &= A \\ \zeta_{\mathcal{A}}(1, 1, 1, 3) &= A \\ \zeta_{\mathcal{A}}(1, 1, 2, 2) &= -2A \\ \zeta_{\mathcal{A}}(1, 1, 3, 1) &= -A \\ \zeta_{\mathcal{A}}(1, 2, 1, 2) &= -3A \\ \zeta_{\mathcal{A}}(1, 2, 2, 1) &= 6A \\ \zeta_{\mathcal{A}}(1, 3, 1, 1) &= -A \\ \zeta_{\mathcal{A}}(2, 1, 1, 2) &= 4A \\ \zeta_{\mathcal{A}}(2, 1, 2, 1) &= -3A \\ \zeta_{\mathcal{A}}(2, 2, 1, 1) &= -2A \\ \zeta_{\mathcal{A}}(3, 1, 1, 1) &= A \\ \zeta_{\mathcal{A}}(1, 1, 1, 1, 2) &= 0 \\ \zeta_{\mathcal{A}}(1, 1, 1, 2, 1) &= 0 \\ \zeta_{\mathcal{A}}(1, 1, 2, 1, 1) &= 0 \\ \zeta_{\mathcal{A}}(1, 2, 1, 1, 1) &= 0 \\ \zeta_{\mathcal{A}}(2, 1, 1, 1, 1) &= 0 \\ \zeta_{\mathcal{A}}(1, 1, 1, 1, 1, 1) &= 0 \end{aligned}$$

$$A = \frac{1}{16}\zeta_{\mathcal{A}}(1, 1, 5)$$

$$\zeta_{\mathcal{A}}(7) = 0$$

$$\zeta_{\mathcal{A}}(1, 6) = 16A$$

$$\zeta_{\mathcal{A}}(2, 5) = -48A$$

$$\zeta_{\mathcal{A}}(3, 4) = 80A$$

$$\zeta_{\mathcal{A}}(4, 3) = -80A$$

$$\zeta_{\mathcal{A}}(5, 2) = 48A$$

$$\zeta_{\mathcal{A}}(6, 1) = -16A$$

$$\zeta_{\mathcal{A}}(1, 1, 5) = 16A$$

$$\zeta_{\mathcal{A}}(1, 2, 4) = -48A$$

$$\zeta_{\mathcal{A}}(1, 3, 3) = 32A$$

$$\zeta_{\mathcal{A}}(1, 4, 2) = -32A$$

$$\zeta_{\mathcal{A}}(1, 5, 1) = 0$$

$$\zeta_{\mathcal{A}}(2, 1, 4) = -16A$$

$$\zeta_{\mathcal{A}}(2, 2, 3) = 64A$$

$$\zeta_{\mathcal{A}}(2, 3, 2) = 0$$

$$\zeta_{\mathcal{A}}(2, 4, 1) = 32A$$

$$\zeta_{\mathcal{A}}(3, 1, 3) = 0$$

$$\zeta_{\mathcal{A}}(3, 2, 2) = -64A$$

$$\zeta_{\mathcal{A}}(3, 3, 1) = -32A$$

$$\zeta_{\mathcal{A}}(4, 1, 2) = 16A$$

$$\zeta_{\mathcal{A}}(4, 2, 1) = 48A$$

$$\zeta_{\mathcal{A}}(5, 1, 1) = -16A$$

$$\zeta_{\mathcal{A}}(1, 1, 1, 4) = 27A$$

$$\zeta_{\mathcal{A}}(1, 1, 2, 3) = -69A$$

$$\zeta_{\mathcal{A}}(1, 1, 3, 2) = 27A$$

$$\zeta_{\mathcal{A}}(1, 1, 4, 1) = -33A$$

$$\zeta_{\mathcal{A}}(1, 2, 1, 3) = 27A$$

$$\zeta_{\mathcal{A}}(1, 2, 2, 2) = 27A$$

$$\zeta_{\mathcal{A}}(1, 2, 3, 1) = 63A$$

$$\zeta_{\mathcal{A}}(1, 3, 1, 2) = 9A$$

$$\zeta_{\mathcal{A}}(1, 3, 2, 1) = -63A$$

$$\zeta_{\mathcal{A}}(1, 4, 1, 1) = 33A$$

$$\begin{aligned}
\zeta_{\mathcal{A}}(2, 1, 1, 3) &= -33A \\
\zeta_{\mathcal{A}}(2, 1, 2, 2) &= 63A \\
\zeta_{\mathcal{A}}(2, 1, 3, 1) &= -9A \\
\zeta_{\mathcal{A}}(2, 2, 1, 2) &= -63A \\
\zeta_{\mathcal{A}}(2, 2, 2, 1) &= -27A \\
\zeta_{\mathcal{A}}(2, 3, 1, 1) &= -27A \\
\zeta_{\mathcal{A}}(3, 1, 1, 2) &= 33A \\
\zeta_{\mathcal{A}}(3, 1, 2, 1) &= -27A \\
\zeta_{\mathcal{A}}(3, 2, 1, 1) &= 69A \\
\zeta_{\mathcal{A}}(4, 1, 1, 1) &= -27A \\
\zeta_{\mathcal{A}}(1, 1, 1, 1, 3) &= 16A \\
\zeta_{\mathcal{A}}(1, 1, 1, 2, 2) &= -48A \\
\zeta_{\mathcal{A}}(1, 1, 1, 3, 1) &= -16A \\
\zeta_{\mathcal{A}}(1, 1, 2, 1, 2) &= 32A \\
\zeta_{\mathcal{A}}(1, 1, 2, 2, 1) &= 64A \\
\zeta_{\mathcal{A}}(1, 1, 3, 1, 1) &= 0 \\
\zeta_{\mathcal{A}}(1, 2, 1, 1, 2) &= -32A \\
\zeta_{\mathcal{A}}(1, 2, 1, 2, 1) &= 0 \\
\zeta_{\mathcal{A}}(1, 2, 2, 1, 1) &= -64A \\
\zeta_{\mathcal{A}}(1, 3, 1, 1, 1) &= 16A \\
\zeta_{\mathcal{A}}(2, 1, 1, 1, 2) &= 0 \\
\zeta_{\mathcal{A}}(2, 1, 1, 2, 1) &= 32A \\
\zeta_{\mathcal{A}}(2, 1, 2, 1, 1) &= -32A \\
\zeta_{\mathcal{A}}(2, 2, 1, 1, 1) &= 48A \\
\zeta_{\mathcal{A}}(3, 1, 1, 1, 1) &= -16A \\
\zeta_{\mathcal{A}}(1, 1, 1, 1, 1, 2) &= 16A \\
\zeta_{\mathcal{A}}(1, 1, 1, 1, 2, 1) &= -48A \\
\zeta_{\mathcal{A}}(1, 1, 1, 2, 1, 1) &= 80A \\
\zeta_{\mathcal{A}}(1, 1, 2, 1, 1, 1) &= -80A \\
\zeta_{\mathcal{A}}(1, 2, 1, 1, 1, 1) &= 48A \\
\zeta_{\mathcal{A}}(2, 1, 1, 1, 1, 1) &= -16A \\
\zeta_{\mathcal{A}}(1, 1, 1, 1, 1, 1, 1) &= 0
\end{aligned}$$