> $restart : with(LinearAlgebra) :$

  # First we need to define the Potential
> $V := -\cos(3 \cdot (x - y)) \cdot \cos(z + y) \cdot \cos(5 \cdot (x + y))$

$$V := -\cos(3x - 3y)\cos(z + y)\cos(5x + 5y) \tag{1}$$

> #Now we define the hessian, which will be a 3x3 matrix (3 variables)
> $H := Matrix([[diff(V, x, x), diff(V, x, y), diff(V, x, z)], [diff(V, x, y), diff(V, y, y),$
    $diff(V, y, z)], [diff(V, x, z), diff(V, z, y), diff(V, z, z)]])$

$$H := [[34\cos(3x - 3y)\cos(z + y)\cos(5x + 5y) - 30\sin(3x - 3y)\cos(z \tag{2}$$
$$+ y)\sin(5x + 5y), 16\cos(3x - 3y)\cos(z + y)\cos(5x + 5y) - 3\sin(3x$$
$$- 3y)\sin(z + y)\cos(5x + 5y) - 5\cos(3x - 3y)\sin(z + y)\sin(5x + 5y),$$
$$-3\sin(3x - 3y)\sin(z + y)\cos(5x + 5y) - 5\cos(3x - 3y)\sin(z + y)\sin(5x$$
$$+ 5y)],$$
$$[16\cos(3x - 3y)\cos(z + y)\cos(5x + 5y) - 3\sin(3x - 3y)\sin(z$$
$$+ y)\cos(5x + 5y) - 5\cos(3x - 3y)\sin(z + y)\sin(5x + 5y), 35\cos(3x$$
$$- 3y)\cos(z + y)\cos(5x + 5y) + 6\sin(3x - 3y)\sin(z + y)\cos(5x + 5y)$$
$$+ 30\sin(3x - 3y)\cos(z + y)\sin(5x + 5y) - 10\cos(3x - 3y)\sin(z$$
$$+ y)\sin(5x + 5y), 3\sin(3x - 3y)\sin(z + y)\cos(5x + 5y) + \cos(3x$$
$$- 3y)\cos(z + y)\cos(5x + 5y) - 5\cos(3x - 3y)\sin(z + y)\sin(5x + 5y)],$$
$$[-3\sin(3x - 3y)\sin(z + y)\cos(5x + 5y) - 5\cos(3x - 3y)\sin(z + y)\sin(5x$$
$$+ 5y), 3\sin(3x - 3y)\sin(z + y)\cos(5x + 5y) + \cos(3x - 3y)\cos(z$$
$$+ y)\cos(5x + 5y) - 5\cos(3x - 3y)\sin(z + y)\sin(5x + 5y), \cos(3x$$
$$- 3y)\cos(z + y)\cos(5x + 5y)]]$$

> $H := eval(H, [x = 0, y = 0, z = 0]);$

$$H := \begin{bmatrix} 34 & 16 & 0 \\ 16 & 35 & 1 \\ 0 & 1 & 1 \end{bmatrix} \tag{3}$$

> # Now that we have the hessian, take the eigenvectors out
> $J, Q := JordanForm(H, output = ['J', 'Q'])$

$$J, Q := \left[\left[\frac{\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}{3} + \frac{1894}{3\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}} \right.\right. \tag{4}$$
$$\left.\left. + \frac{70}{3}, 0, 0 \right],\right.$$

$$\left[0, -\frac{\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}{6} - \frac{947}{3\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}\right.$$

$$+\frac{70}{3}$$

$$-\frac{1}{2}\left(I\sqrt{3}\left(\frac{\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}{3}\right.\right.$$

$$\left.\left.-\frac{1894}{3\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}\right)\right), 0\Bigg],$$

$$\left[0, 0, -\frac{\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}{6} - \frac{947}{3\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}\right.$$

$$+\frac{70}{3}$$

$$+\frac{1}{2}\left(I\sqrt{3}\left(\frac{\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}{3}\right.\right.$$

$$\left.\left.\left.-\frac{1894}{3\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}}\right)\right)\right]\Bigg], \Bigg[$$

$$\left[\left(2\left(21423609\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{4/3}\sqrt{1794374}\right.\right.\right.$$

$$-533520\sqrt{3}\left(39520 + 54\,I\sqrt{1794374}\right)^{5/3}\sqrt{1794374}$$

$$-1600560\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{5/3}\sqrt{1794374}$$

$$+7748504457015228\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{3}$$

$$-41286483\sqrt{3}\left(39520 + 54\,I\sqrt{1794374}\right)^{4/3}\sqrt{1794374}$$

$$- 3038689104\, I \sqrt{3}\, \left(39520 + 54\, I \sqrt{1794374}\right)^{4/3}$$

$$- 1376461569\, \left(39520 + 54\, I \sqrt{1794374}\right)^{5/3} + 137583055926\, I \left(39520\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{2/3} \sqrt{1794374} + 23584283082 \left(39520\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{2/3} \sqrt{1794374}\, \sqrt{3} - 97209607728 \left(39520\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{4/3} - 85685895709408\, I \sqrt{3} \left(39520\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{2/3} + 4402657789632\, I \left(39520 + 54\, I \sqrt{1794374}\right)^{1/}$$

$$^{3} \sqrt{1794374} + 4402657789632 \sqrt{3}\, \sqrt{1794374} \left(39520\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{1/3} + 458820523\, I \sqrt{3} \left(39520 + 54\, I \sqrt{1794374}\right)^{5/3}$$

$$+ 347443077231792 \sqrt{3}\, \sqrt{1794374} - 100690414262880 \left(39520\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{2/3} + 5917589914101924 \left(39520 + 54\, I \sqrt{1794374}\right)^{1/3}\Big)$$

$$\Big) \Big/ \left(2841 \left(947\, I \sqrt{3} \left(39520 + 54\, I \sqrt{1794374}\right)^{2/3} - 19760\, I \left(39520\right.\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{1/3} \sqrt{3} - 27 \sqrt{3}\, \sqrt{1794374} \left(39520 + 54\, I \sqrt{1794374}\right)^{1/3}$$

$$- 27\, I \left(39520 + 54\, I \sqrt{1794374}\right)^{1/3} \sqrt{1794374} + 947 \left(39520\right.$$

$$\left. + 54\, I \sqrt{1794374}\right)^{2/3} + 19760 \left(39520 + 54\, I \sqrt{1794374}\right)^{1/3} - 3587236\right)$$

$$\left(39520 + 54\, I \sqrt{1794374}\right)^{1/3} \left(19760\, I \left(39520 + 54\, I \sqrt{1794374}\right)^{1/3} \sqrt{3}\right.$$

$$+ 27\sqrt{3}\sqrt{1794374}\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3} + 81\,I\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{1794374} - 1793618\,I\sqrt{3} - 59280\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{1/3} - 5380854\Big)\Big), \left(2\left(72641529\,I\left(39520\right.\right.\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{4/3}\sqrt{1794374} - 533520\sqrt{3}\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{5/3}\sqrt{1794374} + 1600560\,I\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{5/3}\sqrt{1794374} - 915457271456652\,I\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{3} + 9931437\sqrt{3}\left(39520 + 54\,I\sqrt{1794374}\right)^{4/}$$

$$\sqrt[3]{1794374} - 47085459312\,I\sqrt{3}\left(39520 + 54\,I\sqrt{1794374}\right)^{4/3}$$

$$+ 1376461569\left(39520 + 54\,I\sqrt{1794374}\right)^{5/3} - 170998159266\,I\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{2/3}\sqrt{1794374} + 56999386422\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{2/3}\sqrt{1794374}\sqrt{3} - 53162837520\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{4/3} + 93188154986144\,I\sqrt{3}\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{2/3} - 4402657789632\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{1/}$$

$$\sqrt[3]{1794374} - 4402657789632\sqrt{3}\sqrt{1794374}\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{1/3} + 458820523\,I\sqrt{3}\left(39520 + 54\,I\sqrt{1794374}\right)^{5/3}$$

$$+ 347443077231792 \sqrt{3} \sqrt{1794374} + 279564464958432 \left(39520\right.$$

$$\left.+ 54\,I\sqrt{1794374}\right)^{2/3} + 14581551642573804 \left(39520\right.$$

$$\left.\left. + 54\,I\sqrt{1794374}\right)^{1/3}\right)\right) \Big/ \left(2841\left(947\,I\sqrt{3}\left(39520 + 54\,I\sqrt{1794374}\right)^{2/3}\right.\right.$$

$$- 19760\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{3} - 27\sqrt{3}\sqrt{1794374}\left(39520\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{1/3} - 27\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{1794374}$$

$$+ 947\left(39520 + 54\,I\sqrt{1794374}\right)^{2/3} + 19760\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}$$

$$\left. - 3587236\right)\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}\left(19760\,I\left(39520\right.\right.$$

$$\left. + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{3} + 27\sqrt{3}\sqrt{1794374}\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}$$

$$+ 81\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{1794374} - 1793618\,I\sqrt{3}$$

$$\left.\left. - 59280\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3} - 5380854\right)\right),$$

$$\left(458820523\,I\sqrt{3}\left(39520 + 54\,I\sqrt{1794374}\right)^{4/3} - 533520\sqrt{3}\left(39520\right.\right.$$
$$\left. + 54\,I\sqrt{1794374}\right)^{4/3}\sqrt{1794374} + 533520\,I\left(39520\right.$$
$$\left. + 54\,I\sqrt{1794374}\right)^{4/3}\sqrt{1794374} + 2175603031842\,I\sqrt{3}\left(39520\right.$$
$$\left. + 54\,I\sqrt{1794374}\right)^{2/3} + 774842976\left(39520 + 54\,I\sqrt{1794374}\right)^{2/}$$
$$^{3}\sqrt{1794374}\sqrt{3} + 458820523\left(39520 + 54\,I\sqrt{1794374}\right)^{4/3}$$
$$- 774842976\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{2/3}\sqrt{1794374}$$
$$- 51473048478784\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{3}$$
$$- 91722037284\,I\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3}\sqrt{1794374}$$
$$+ 2175603031842\left(39520 + 54\,I\sqrt{1794374}\right)^{2/3}$$
$$\left. + 118599991320704\left(39520 + 54\,I\sqrt{1794374}\right)^{1/3} - 4613271969911016\right)$$

$$\Big/ \Big(5095668738 \big(947\,I\sqrt{3}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{2/3}$$

$$- 19760\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3} - 27\sqrt{3}\,\sqrt{1794374}\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3} - 27\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374}$$

$$+ 947\,\big(39520 + 54\,I\sqrt{1794374}\big)^{2/3} + 19760\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}$$

$$- 3587236\big)\Big)\Big],$$

$$\Big[-\big(181824\sqrt{3}\,\big(156566\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 603\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374} + 27582322\,I - 17046\sqrt{1794374}\big)\big)\Big/$$

$$\Big(\big(947\,I\sqrt{3}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{2/3} - 19760\,I\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3} - 27\sqrt{3}\,\sqrt{1794374}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}$$

$$- 27\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374} + 947\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{2/3} + 19760\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 3587236\big)$$

$$\big(19760\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3} + 27\sqrt{3}\,\sqrt{1794374}\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3} + 81\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374}$$

$$- 1793618\,I\sqrt{3} - 59280\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 5380854\big)\big),$$

$$\big(90912\,\big(156566\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3}$$

$$- 603\sqrt{3}\,\sqrt{1794374}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} + 1809\,I\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374} + 27582322\,I\sqrt{3} - 17046\sqrt{3}\,\sqrt{1794374}$$

$$- 51138\,I\sqrt{1794374} + 469698\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 82746966\big)$$

$$\Big) \Big/ \Big(\big(947\,I\sqrt{3}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{2/3} - 19760\,I\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3} - 27\sqrt{3}\sqrt{1794374}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}$$

$$- 27\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374} + 947\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{2/3} + 19760\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 3587236\big)$$

$$\big(19760\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3} + 27\sqrt{3}\sqrt{1794374}\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3} + 81\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374}$$

$$- 1793618\,I\sqrt{3} - 59280\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 5380854\big)\Big),$$

$$\Big(8\,\big(19760\,I\sqrt{3}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{2/3} + 27\,\big(39520$$
$$+ 54\,I\sqrt{1794374}\big)^{2/3}\sqrt{1794374}\sqrt{3} - 27\,I\,\big(39520$$
$$+ 54\,I\sqrt{1794374}\big)^{2/3}\sqrt{1794374} - 1793618\,I\,\big(39520$$
$$+ 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3} + 19760\,\big(39520 + 54\,I\sqrt{1794374}\big)^{2/3}$$
$$+ 1793618\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 240344812\big)\Big) \Big/$$
$$\Big(947\,\big(947\,I\sqrt{3}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{2/3} - 19760\,I\,\big(39520$$
$$+ 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3} - 27\sqrt{3}\sqrt{1794374}\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}$$
$$- 27\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374} + 947\,\big(39520$$
$$+ 54\,I\sqrt{1794374}\big)^{2/3} + 19760\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} - 3587236\big)\Big)$$
$$\Big],$$
$$\Big[\big(181824\sqrt{3}\,\big(19760\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3} + 27\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{1794374} - 1793618\,I\big)\big) \Big/ \Big(\big(947\,I\sqrt{3}\,\big(39520$$

$$+ 54\,I\sqrt{1794374}\big)^{2/3} - 19760\,I\,\big(39520 + 54\,I\sqrt{1794374}\big)^{1/3}\sqrt{3}$$

$$-27\sqrt{3}\sqrt{1794374}\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-27\,I\left(39520\right.$$

$$+54\,I\sqrt{1794374}\left.\right)^{1/3}\sqrt{1794374}+947\left(39520+54\,I\sqrt{1794374}\right)^{2/3}$$

$$+19760\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-3587236\right)\left(19760\,I\left(39520\right.\right.$$

$$+54\,I\sqrt{1794374}\left.\right)^{1/3}\sqrt{3}+27\sqrt{3}\sqrt{1794374}\left(39520+54\,I\sqrt{1794374}\right)^{1/3}$$

$$+81\,I\left(39520+54\,I\sqrt{1794374}\right)^{1/3}\sqrt{1794374}-1793618\,I\sqrt{3}$$

$$-59280\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-5380854\left.\right)\right),$$

$$-\left(90912\left(19760\,I\left(39520+54\,I\sqrt{1794374}\right)^{1/3}\sqrt{3}\right.\right.$$

$$+27\sqrt{3}\sqrt{1794374}\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-81\,I\left(39520\right.$$

$$+54\,I\sqrt{1794374}\left.\right)^{1/3}\sqrt{1794374}-1793618\,I\sqrt{3}+59280\left(39520\right.$$

$$+54\,I\sqrt{1794374}\left.\right)^{1/3}+5380854\left.\right)\right)\Big/\left(\left(947\,I\sqrt{3}\left(39520\right.\right.\right.$$

$$+54\,I\sqrt{1794374}\left.\right)^{2/3}-19760\,I\left(39520+54\,I\sqrt{1794374}\right)^{1/3}\sqrt{3}$$

$$-27\sqrt{3}\sqrt{1794374}\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-27\,I\left(39520\right.$$

$$+54\,I\sqrt{1794374}\left.\right)^{1/3}\sqrt{1794374}+947\left(39520+54\,I\sqrt{1794374}\right)^{2/3}$$

$$+19760\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-3587236\right)\left(19760\,I\left(39520\right.\right.$$

$$+54\,I\sqrt{1794374}\left.\right)^{1/3}\sqrt{3}+27\sqrt{3}\sqrt{1794374}\left(39520+54\,I\sqrt{1794374}\right)^{1/3}$$

$$+81\,I\left(39520+54\,I\sqrt{1794374}\right)^{1/3}\sqrt{1794374}-1793618\,I\sqrt{3}$$

$$-59280\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-5380854\left.\right)\right),-90912\Big/$$

$$\left(947\,I\sqrt{3}\,\left(39520+54\,I\sqrt{1794374}\right)^{2/3}-19760\,I\left(39520\right.\right.$$
$$+54\,I\sqrt{1794374}\Big)^{1/3}\sqrt{3}-27\sqrt{3}\,\sqrt{1794374}\left(39520+54\,I\sqrt{1794374}\right)^{1/3}$$
$$-27\,I\left(39520+54\,I\sqrt{1794374}\right)^{1/3}\sqrt{1794374}+947\left(39520\right.$$
$$\left.\left.+54\,I\sqrt{1794374}\right)^{2/3}+19760\left(39520+54\,I\sqrt{1794374}\right)^{1/3}-3587236\right)\Big]\Big]$$

> J

$$\left[\left[\left[\frac{\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}{3}+\frac{1894}{3\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}+\frac{70}{3},\ 0,\right.\right.\right.\quad \textbf{(5)}$$

$$\left.0\right],$$

$$\left[0,\ -\frac{\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}{6}-\frac{947}{3\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}\right.$$

$$+\frac{70}{3}$$

$$-\frac{1}{2}\left(I\sqrt{3}\left(\frac{\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}{3}\right.\right.$$

$$\left.\left.-\frac{1894}{3\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}\right)\right),\ 0\right],$$

$$\left[0,\ 0,\ -\frac{\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}{6}-\frac{947}{3\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}\right.$$

$$+\frac{70}{3}$$

$$+\frac{1}{2}\left(I\sqrt{3}\left(\frac{\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}{3}\right.\right.$$

$$\left.\left.\left.\left.-\frac{1894}{3\left(39520+54\,I\sqrt{1794374}\right)^{1/3}}\right)\right)\right]\right]\right]$$

> $evalf(J)$

$$[[50.51822645 - 5. \times 10^{-9} \, I, 0., 0.],$$
$$[0., 18.51981170 + 1.932050808 \times 10^{-8} \, I, 0.],$$
$$[0., 0., 0.961961840 - 1.532050808 \times 10^{-8} \, I]]$$

(6)

> $w\_1 := 50.51$

$$w\_1 := 50.51$$

(7)

> $w\_2 := 18.51$

$$w\_2 := 18.51$$

(8)

> $w\_2 := 0.961$

$$w\_2 := 0.961$$

(9)

>