In[36]:= `Solve[1 / 4 V^2 Y^4 - 1 / 2 V Y^2 - Y + 1 == 0, Y]`

résous

Out[36]=

$$\left\{\left\{Y \to -\frac{1}{2}\sqrt{\left(\frac{4}{3\,V} + \frac{26}{3\left(27\,V^2 + 35\,V^3 + 3\sqrt{3}\,\sqrt{27\,V^4 + 70\,V^5 - 36\,V^6}\right)^{1/3}} + \frac{2\left(27\,V^2 + 35\,V^3 + 3\sqrt{3}\,\sqrt{27\,V^4 + 70\,V^5 - 36\,V^6}\right)^{1/3}}{3\,V^2}\right)} - \frac{1}{2}\sqrt{\left(\frac{8}{3\,V} - \frac{26}{3\left(27\,V^2 + 35\,V^3 + 3\sqrt{3}\,\sqrt{27\,V^4 + 70\,V^5 - 36\,V^6}\right)^{1/3}} - \frac{2\left(27\,V^2 + 35\,V^3 + 3\sqrt{3}\,\sqrt{27\,V^4 + 70\,V^5 - 36\,V^6}\right)^{1/3}}{3\,V^2} - \frac{8}{V^2\sqrt{\frac{4}{3\,V} + \frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}} + \frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}}}\right)}\right\},$$

$$\left\{Y \to -\frac{1}{2}\sqrt{\left(\frac{4}{3\,V} + \frac{26}{3\left(27\,V^2 + 35\,V^3 + 3\sqrt{3}\,\sqrt{27\,V^4 + 70\,V^5 - 36\,V^6}\right)^{1/3}} + \frac{2\left(27\,V^2 + 35\,V^3 + 3\sqrt{3}\,\sqrt{27\,V^4 + 70\,V^5 - 36\,V^6}\right)^{1/3}}{3\,V^2}\right)} + \frac{1}{2}\sqrt{\left(\frac{8}{3\,V} - \frac{26}{3\left(27\,V^2 + 35\,V^3 + 3\sqrt{3}\,\sqrt{27\,V^4 + 70\,V^5 - 36\,V^6}\right)^{1/3}} -\right.}$$

$$\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}-$$

$$\frac{8}{V^2\sqrt{\frac{4}{3\,V}+\frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}+\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}}}\Bigg\},$$

$$\left\{Y\to\frac{1}{2}\sqrt{\left(\frac{4}{3\,V}+\frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}+\right.\right.$$

$$\left.\left.\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}\right)-\right.$$

$$\left.\frac{1}{2}\sqrt{\left(\frac{8}{3\,V}-\frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}-\right.\right.$$

$$\left.\left.\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}+\right.$$

$$\left.\frac{8}{V^2\sqrt{\frac{4}{3\,V}+\frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}+\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}}}\right)\Bigg\},$$

$$\left\{Y\to\frac{1}{2}\sqrt{\left(\frac{4}{3\,V}+\frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}+\right.\right.$$

$$\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}\Bigg)+$$

$$\frac{1}{2}\sqrt{\left(\frac{8}{3\,V}-\frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}-\right.}$$

$$\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}+$$

$$\left.\left.\frac{8}{V^2\sqrt{\frac{4}{3\,V}+\frac{26}{3\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}+\frac{2\left(27\,V^2+35\,V^3+3\sqrt{3}\,\sqrt{27\,V^4+70\,V^5-36\,V^6}\right)^{1/3}}{3\,V^2}}}\right)\right\}\Bigg\}$$

In[45]:=
```
V = 0.00000001
Solve[1 / 4 V^2 Y^4 - 1 / 2 V Y^2 - Y + 1 == 0, Y]
```
résous

Out[45]= $1.\times 10^{-8}$

Out[46]= $\{\{Y\to -171\,095.-296\,008.\,i\},\{Y\to -171\,095.+296\,008.\,i\},\{Y\to 1.\},\{Y\to 342\,190.\}\}$