



In[791]:= **M.V**

$$\text{Out[791]} = \begin{pmatrix} 1 \\ 0 \\ 0 \\ 0 \\ \frac{1}{3} + \frac{1}{3} e^{-\frac{2i\pi}{3}} + \frac{1}{3} e^{\frac{2i\pi}{3}} \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ \frac{1}{3} + \frac{1}{3} e^{-\frac{2i\pi}{3}} + \frac{1}{3} e^{\frac{2i\pi}{3}} \end{pmatrix}$$

In[788]:= **Cos** $\left(\frac{2\pi}{3}\right) + i * \text{Sin}\left(\frac{2\pi}{3}\right)$

$$\text{Out[788]} = -\frac{1}{2} + \frac{i\sqrt{3}}{2}$$

In[789]:= **Cos** $\left(\frac{-2\pi}{3}\right) + i * \text{Sin}\left(\frac{-2\pi}{3}\right)$

$$\text{Out[789]} = -\frac{1}{2} - \frac{i\sqrt{3}}{2}$$

In[787]:=  $\frac{1}{3} * \left(1 + \left(\text{Cos}\left(\frac{2\pi}{3}\right) + i * \text{Sin}\left(\frac{2\pi}{3}\right)\right) + \left(\text{Cos}\left(\frac{-2\pi}{3}\right) + i * \text{Sin}\left(\frac{-2\pi}{3}\right)\right)\right)$

Out[787]= 0

In[790]:= **Simplify**[**M.V**]

$$\text{Out[790]} = \begin{pmatrix} 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{pmatrix}$$