

In[45]:= **z1 = 2 + 3 I**
[虚]

Out[45]= $2 + 3 i$

In[46]:= **z2 = 4 + I**
[虚数]

Out[46]= $4 + i$

In[47]:= **z1 + z2**

Out[47]= $6 + 4 i$

In[48]:= **z1 - z2**

Out[48]= $-2 + 2 i$

In[49]:= **z1 z2**

Out[49]= $5 + 14 i$

In[50]:= **z1 / z2**

Out[50]= $\frac{11}{17} + \frac{10 i}{17}$

In[51]:= **Abs[z1]**
[絶対値]

Out[51]= $\sqrt{13}$

In[52]:= **Re[z1]**
[実部]

Out[52]= 2

In[53]:= **Im[z1]**
[複素数の虚部]

Out[53]= 3

In[54]:= **Conjugate[z1]**
[複素共役]

Out[54]= $2 - 3 i$

In[55]:= **Solve[{x^2 - y^2 == 1, 2 x y == -1}, {x, y}, Reals]**
[解< [実数領域]

Out[55]= $\left\{ \left\{ x \rightarrow -\frac{1}{2\sqrt{-\frac{1}{2} + \frac{1}{\sqrt{2}}}}, y \rightarrow \sqrt{-\frac{1}{2} + \frac{1}{\sqrt{2}}} \right\}, \left\{ x \rightarrow \frac{1}{2\sqrt{-\frac{1}{2} + \frac{1}{\sqrt{2}}}}, y \rightarrow -\sqrt{-\frac{1}{2} + \frac{1}{\sqrt{2}}} \right\} \right\}$

In[56]:= **sol = Solve[z^2 == 1 - I, z]**
[解< [虚数単]

Out[56]= $\left\{ \left\{ z \rightarrow -\sqrt{1 - i} \right\}, \left\{ z \rightarrow \sqrt{1 - i} \right\} \right\}$

In[57]:= `sol2 = ComplexExpand[sol]`
式の展開

$$\text{Out[57]= } \left\{ \left\{ z \rightarrow -2^{1/4} \cos\left[\frac{\pi}{8}\right] + i 2^{1/4} \sin\left[\frac{\pi}{8}\right] \right\}, \left\{ z \rightarrow 2^{1/4} \cos\left[\frac{\pi}{8}\right] - i 2^{1/4} \sin\left[\frac{\pi}{8}\right] \right\} \right\}$$

In[58]:= `ToRadicals[sol2]`
根基で

$$\text{Out[58]= } \left\{ \left\{ z \rightarrow \frac{i \sqrt{2 - \sqrt{2}}}{2^{3/4}} - \frac{\sqrt{2 + \sqrt{2}}}{2^{3/4}} \right\}, \left\{ z \rightarrow -\frac{i \sqrt{2 - \sqrt{2}}}{2^{3/4}} + \frac{\sqrt{2 + \sqrt{2}}}{2^{3/4}} \right\} \right\}$$