In[906]:=
```
(*Pdn = {0.49219-0.50781,1,0.47656-0.52344}*)

Pdn = {0.458, -0.768, -0.4399}
```
Out[906]= {0.458, −0.768, −0.4399}

In[907]:=
```
nPd2 = Pdn .Pdn
```
Out[907]= 0.9931

In[908]:=
```
Pd = 1/Sqrt[nPd2] Pdn
```
Out[908]= {0.459588, −0.770663, −0.441426}

In[909]:=
```
(σPd = Pd[[1]] * PauliMatrix[1] + Pd[[2]] * PauliMatrix[2] + Pd[[3]] * PauliMatrix[3]) //
                    macierze Pauliego                 macierze Pauliego                 macierze Pauliego
 MatrixForm
 postać macierzy
```

Out[909]//MatrixForm=

$$\begin{pmatrix} -0.441426 & 0.459588 + 0.770663\,i \\ 0.459588 - 0.770663\,i & 0.441426 \end{pmatrix}$$

In[910]:=
```
(wwd = Eigensystem[σPd]) // MatrixForm
      wartości i wektory własne   postać macierzy
```

Out[910]//MatrixForm=

$$\begin{pmatrix} -1. & 1. \\ \{0.434824 + 0.729137\,i, -0.528476 + 0.\,i\} & \{0.270681 + 0.453893\,i, 0.848948 + 0.\,i\} \end{pmatrix}$$

In[911]:=
```
ψnd = {{wwd[[2, 2, 1]]}, {wwd[[2, 2, 2]]}}
```
Out[911]= {{0.270681 + 0.453893 i}, {0.848948 + 0. i}}

In[912]:=

In[913]:=
```
(*normad2= (Flatten[Chop[ψnd^T.ψnd]][[1]])*)
            spłaszcz  zamiana bardzo małej liczby na ze
```

In[914]:=
```
ψud = (* (1/Sqrt[normad2]) **) ψnd
```
Out[914]= {{0.270681 + 0.453893 i}, {0.848948 + 0. i}}

In[915]:=
```
C0 = (ψud[[1, 1]]);
C1 = (ψud[[2, 1]]);
ϕ0 = Arg[C0]
     argument liczby zesp
ϕ1 = Arg[C1];
     argument liczby zesp
mC0 = Abs[C0];
      wartość bezwzględ
mC1 = Abs[C1];
      wartość bezwzględ
ϕw = ϕ1 - ϕ0
```
Out[917]= 1.03306

Out[921]= −1.03306

In[922]:=
```
(ψd = Chop[mC0 |0⟩ + e^(Defer[i] ϕw mC1 |1⟩)]) // MatrixForm
```
zamiana bardzo małej liczby na zero | postać macierzy

Out[922]//MatrixForm=

$$\begin{pmatrix} 0.528476 \\ 0.848948\, e^{-1.03306\, i} \end{pmatrix}$$

In[923]:=
```
(ψd) // MatrixForm
```
postać macierzy

Out[923]//MatrixForm=

$$\begin{pmatrix} 0.528476 \\ 0.848948\, e^{-1.03306\, i} \end{pmatrix}$$

In[924]:=
```
( 0.5284763229908036`
  0.848948040835315` e^(-1.033061898705963` i) ) // N // MatrixForm
```
pr··· | postać macierzy

Out[924]//MatrixForm=

$$\begin{pmatrix} 0.528476 \\ 0.434824 - 0.729137\, i \end{pmatrix}$$