

Eigenvalues $\begin{bmatrix} ea & \lambda \\ \lambda & ea \end{bmatrix}$

{ea - λ, ea + λ}

In[5]:= **Eigenvalues** $\begin{bmatrix} ea & \lambda \sqrt{2} & 0 \\ \lambda \sqrt{2} & ea & \lambda \sqrt{2} \\ 0 & \lambda \sqrt{2} & ea \end{bmatrix}$

Out[5]= {ea, ea - 2 λ, ea + 2 λ}

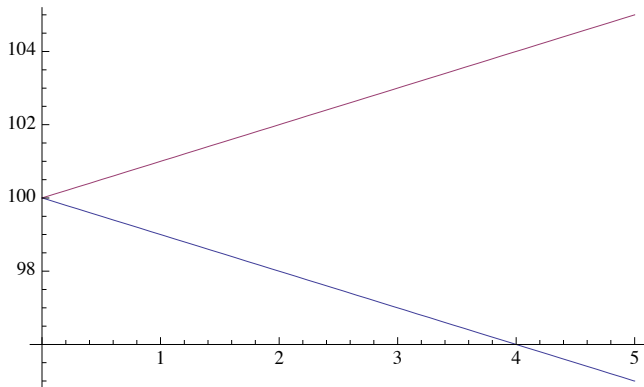
In[6]:= **Eigenvalues** $\begin{bmatrix} ea & \lambda \sqrt{3} & 0 & 0 \\ \lambda \sqrt{3} & ea & 2 \lambda & 0 \\ 0 & 2 \lambda & ea & \lambda \sqrt{3} \\ 0 & 0 & \lambda \sqrt{3} & ea \end{bmatrix}$

Out[6]= {ea - 3 λ, ea - λ, ea + λ, ea + 3 λ}

Eigenvalues $\begin{bmatrix} 100 & \lambda \\ \lambda & 100 \end{bmatrix}$

{100 - λ, 100 + λ}

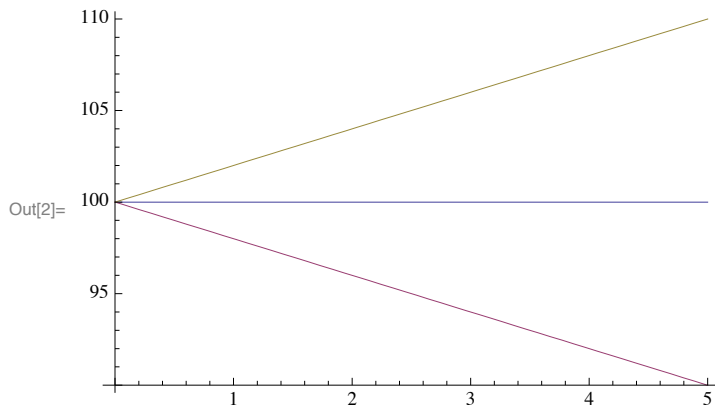
Plot [{100 - λ, 100 + λ}, {λ, 0, 5}]



In[1]:= **Eigenvalues** $\begin{bmatrix} 100 & \lambda \sqrt{2} & 0 \\ \lambda \sqrt{2} & 100 & \lambda \sqrt{2} \\ 0 & \lambda \sqrt{2} & 100 \end{bmatrix}$

Out[1]= {100, -2 (-50 + λ), 2 (50 + λ)}

In[2]:= **Plot**[[{100, -2 (-50 + λ), 2 (50 + λ)}, {λ, 0, 5}]



In[3]:= **Eigenvalues** $\begin{bmatrix} 100 & \lambda \sqrt{3} & 0 & 0 \\ \lambda \sqrt{3} & 100 & 2\lambda & 0 \\ 0 & 2\lambda & 100 & \lambda \sqrt{3} \\ 0 & 0 & \lambda \sqrt{3} & 100 \end{bmatrix}$

Out[3]= {100 - 3 λ, 100 - λ, 100 + λ, 100 + 3 λ}

In[4]:= **Plot**[[{100 - 3 λ, 100 - λ, 100 + λ, 100 + 3 λ}, {λ, 0, 5}]

