

Pensieve header: Minor demos for class 1.

**1 + 1**

2

**Eigensystem**  $\left[ \begin{pmatrix} 1 & 2 \\ 3 & 4 \end{pmatrix} \right]$



**Eigensystem**  $[\{1, 2\}, \{3, 4\}]$

$\left\{ \left\{ \frac{1}{2} (5 + \sqrt{33}), \frac{1}{2} (5 - \sqrt{33}) \right\}, \left\{ \left\{ \frac{1}{6} (-3 + \sqrt{33}), 1 \right\}, \left\{ \frac{1}{6} (-3 - \sqrt{33}), 1 \right\} \right\} \right\}$

**f[1] = f[2] = 1; f[n\_] := f[n - 1] + f[n - 2]**

**f[6]**

8

**f[20]**

6765

**f[40]**

102 334 155