Pensieve header: Sep 22: Too many ways to compute Fibonacci.

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ImageRestyle[ , ]
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Too many ways to compute Fibonacci

The Naive Way

```
f0[0] = f0[1] = 1; f0[n_] := f0[n - 1] + f0[n - 2];
Table[Echo@Timing[n → f0[n]], {n, 1, 40}]
```

The Naive Way, Corrected

```
f1[0] = f1[1] = 1; f1[n_] := f1[n - 1] + f1[n - 2];
Timing[f1[40]];
```

"prev", "cur", and "While".

"prev", "cur", and "Do".

"prev", "cur", and "For".

A "While" loop for $\{f_1, f_2, \ldots\}$ (using negative indices)

A "While" loop for $\{f_1, f_2, \ldots\}$ (using "Total" and "Most")

"ReplaceRepeated" on $\begin{pmatrix} n \\ f_{n-1} \\ f_n \end{pmatrix}$.

"NestWhile" on $\begin{pmatrix} n \\ f_{n-1} \\ f_n \end{pmatrix}$.

"Nest" on $\begin{pmatrix} f_{n-1} \\ f_n \end{pmatrix}$.

A Sum of Binomial Coefficients

Solve for an "explicit" formula, then use it.

Other Items

Continue looking at Charlene's project? A look at Etienne's project?