Pensieve header: Playing with the Catalan numbers.

```
In[•]:= Table[CatalanNumber[n], {n, 0, 10}]
```

```
Out[•]=
{1, 1, 2, 5, 14, 42, 132, 429, 1430, 4862, 16 796}
```

```
In[•]:= N@Table[n^(3/2) CatalanNumber[n] / 4^n, {n, 0, 100}]
```

```
Out[•]=
{0., 0.25, 0.353553, 0.405949, 0.4375, 0.458569, 0.473632, 0.484936, 0.493732, 0.500771,
 0.506531, 0.511332, 0.515395, 0.518878, 0.521897, 0.524539, 0.52687, 0.528943, 0.530797,
 0.532466, 0.533976, 0.535349, 0.536602, 0.537751, 0.538809, 0.539784, 0.540688,
 0.541527, 0.542308, 0.543038, 0.54372, 0.544359, 0.54496, 0.545526, 0.546059, 0.546562,
 0.547039, 0.54749, 0.547918, 0.548325, 0.548712, 0.54908, 0.549431, 0.549767, 0.550087,
 0.550394, 0.550687, 0.550968, 0.551238, 0.551497, 0.551746, 0.551985, 0.552215,
 0.552437, 0.552651, 0.552857, 0.553056, 0.553248, 0.553433, 0.553612, 0.553786,
 0.553953, 0.554116, 0.554273, 0.554426, 0.554574, 0.554717, 0.554857, 0.554992,
 0.555123, 0.555251, 0.555375, 0.555496, 0.555613, 0.555728, 0.555839, 0.555947,
 0.556053, 0.556156, 0.556256, 0.556354, 0.55645, 0.556543, 0.556634, 0.556723,
 0.55681, 0.556895, 0.556978, 0.557059, 0.557138, 0.557215, 0.557291, 0.557365,
 0.557438, 0.557509, 0.557578, 0.557647, 0.557713, 0.557779, 0.557843, 0.557906}
```

```
In[•]:= Catalan // N
```

```
Out[•]=
0.915966
```