

Pensieve header: Bizarre exponential-time behaviour in pattern matching.

```
In[ ]:= h /: S1_h + S2_h := h[0];
```

```
In[ ]:= Table[Echo@Timing[k + Sum[h[0], {i, k}]], {k, 20}]
```

```
» {0., 1 + h[0]}
» {0., 2 + h[0]}
» {0., 3 + h[0]}
» {0., 4 + h[0]}
» {0., 5 + h[0]}
» {0., 6 + h[0]}
» {0., 7 + h[0]}
» {0., 8 + h[0]}
» {0.015625, 9 + h[0]}
» {0.046875, 10 + h[0]}
» {0.140625, 11 + h[0]}
» {0.4375, 12 + h[0]}
» {1.23438, 13 + h[0]}
» {3.60938, 14 + h[0]}
» {7.92188, 15 + h[0]}
» {17.0781, 16 + h[0]}
» {57.4219, 17 + h[0]}
```

```
Out[ ]:= $Aborted
```