

In[ ]:= **Date** [ ]

Out[ ]:= {2020, 12, 23, 18, 4, 28.9266100}

In[ ]:= **SetDirectory**@"C:\\drorbn\\AcademicPensieve\\Projects\\BabyDoPeGDO"  
 << **Engine.m**  
 << **Objects.m**

Out[ ]:= C:\\drorbn\\AcademicPensieve\\Projects\\BabyDoPeGDO

Loading KnotTheory` version of February 2, 2020, 10:53:45.2097.

Read more at <http://katlas.org/wiki/KnotTheory>.

This is Profile.m of <http://www.drorbn.net/AcademicPensieve/Projects/Profile/>.

This version: April 2020. Original version: July 1994.

In[ ]:= **BeginProfile** [ ] ;  
**PopupWindow** [**Button** ["Show Profile Monitor"],  
**Dynamic** [**PrintProfile** [ ], **UpdateInterval** → 3, **TrackedSymbols** → { } ] ]

Out[ ]:=

In[ ]:= **\$k = 1**

Out[ ]:= 1

In[ ]:= **NewBit** [**K\_**] := **Module** [ {**Alex** = **Alexander** [**K**] [**T**] } ,  

$$T^3 \frac{\text{Alex}^2}{T - 1} Z[K][[3, 2]] // \text{Factor}$$
 ]

In[ ]:= **NewBit** /@ **AllKnots** [ {3, 5} ]

**KnotTheory**: Loading precomputed data in PD4Knots`.

Out[ ]:=  $\left\{ 2 - T + T^2, (1 + T) (1 - 3 T + T^2), \frac{4 - 3 T + 5 T^2 - 3 T^3 + 3 T^4 - T^5 + T^6}{T^2}, 9 - 11 T + 7 T^2 - T^3 \right\}$

In[ ]:= (\*Two knots with equal Alexander, new bit does not agree\*)

**Alexander** [**Knot** [6, 1] ] == **Alexander** [**Knot** [9, 46] ]

**Timing** [**NewBit** [**Knot** [6, 1] ] ] == **NewBit** [**Knot** [9, 46] ] ]

Out[ ]:= True

Out[ ]:= {49.7813, 5 - 11 T - T<sup>2</sup> + 3 T<sup>3</sup> == 7 - 21 T + 9 T<sup>2</sup> + T<sup>3</sup>}

```
In[ ]:= PrintProfile []
```

```
Out[ ]:= ProfileRoot is root. Profiled time: 87.468  
  ( 24)      0/ 0.016 above CF  
  ( 237)  1.715/ 3.635 above Zip1  
  ( 237)  0.983/ 45.429 above Zip2  
  ( 237) 32.478/ 38.388 above Zip3  
Zip3: called 237 times, time in 32.478/38.388  
  ( 237) 32.478/ 38.388 under ProfileRoot  
  ( 1422) 3.109/ 5.910 above CF  
CF: called 3342 times, time in 26.151/52.292  
  ( 24)      0/ 0.016 under ProfileRoot  
  ( 711)  0.986/ 1.920 under Zip1  
  ( 1185) 22.056/ 44.446 under Zip2  
  ( 1422) 3.109/ 5.910 under Zip3  
  ( 15513) 26.141/ 26.141 above CCF  
CCF: called 15513 times, time in 26.141/26.141  
  ( 15513) 26.141/ 26.141 under CF  
Zip1: called 237 times, time in 1.715/3.635  
  ( 237)  1.715/ 3.635 under ProfileRoot  
  ( 711)  0.986/ 1.920 above CF  
Zip2: called 237 times, time in 0.983/45.429  
  ( 237)  0.983/ 45.429 under ProfileRoot  
  ( 1185) 22.056/ 44.446 above CF
```

```
In[ ]:= Date []
```

```
Out[ ]:= {2020, 12, 23, 18, 6, 11.9201649}
```