

$N =$	$P_{10} = \frac{45}{16}$	$P_{11} = \frac{15}{16}$	$P_{12} = \frac{15}{16}$	$P_{13} = \frac{15}{16}$	$P_{14} = \frac{15}{16}$	$P_{15} = \frac{15}{16}$	$P_{16} = \frac{15}{16}$	$P_{17} = \frac{7}{2}$	$P_{18} = \frac{5}{16}$	$P_{19} = \frac{15}{16}$	$P_{20} = \frac{15}{16}$	$P_{21} = \frac{7}{2}$	$P_{22} = \frac{5}{16}$	$P_{23} = \frac{15}{16}$	$P_{24} = \frac{15}{16}$	$P_{25} = \frac{15}{16}$	$P_{26} = \frac{15}{16}$	$P_{27} = \frac{7}{2}$	$P_{28} = \frac{5}{16}$	$P_{29} = \frac{15}{16}$	$P_{30} = \frac{15}{16}$	$P_{31} = \frac{7}{2}$	$P_{32} = \frac{5}{16}$	$P_{33} = \frac{15}{16}$	$P_{34} = \frac{15}{16}$	$P_{35} = \frac{15}{16}$	$P_{36} = \frac{15}{16}$	$P_{37} = \frac{7}{2}$	$P_{38} = \frac{5}{16}$	$P_{39} = \frac{15}{16}$	$P_{40} = \frac{15}{16}$	$P_{41} = \frac{7}{2}$	$P_{42} = \frac{5}{16}$	$P_{43} = \frac{15}{16}$	$P_{44} = \frac{15}{16}$	$P_{45} = \frac{15}{16}$	$P_{46} = \frac{15}{16}$	$P_{47} = \frac{7}{2}$	$P_{48} = \frac{5}{16}$	$P_{49} = \frac{15}{16}$	$P_{50} = \frac{15}{16}$	$P_{51} = \frac{7}{2}$	$P_{52} = \frac{5}{16}$	$P_{53} = \frac{15}{16}$	$P_{54} = \frac{15}{16}$	$P_{55} = \frac{15}{16}$	$P_{56} = \frac{15}{16}$	$P_{57} = \frac{7}{2}$	$P_{58} = \frac{5}{16}$	$P_{59} = \frac{15}{16}$	$P_{60} = \frac{15}{16}$	$P_{61} = \frac{7}{2}$	$P_{62} = \frac{5}{16}$	$P_{63} = \frac{15}{16}$	$P_{64} = \frac{15}{16}$	$P_{65} = \frac{15}{16}$	$P_{66} = \frac{15}{16}$	$P_{67} = \frac{7}{2}$	$P_{68} = \frac{5}{16}$	$P_{69} = \frac{15}{16}$	$P_{70} = \frac{15}{16}$	$P_{71} = \frac{7}{2}$	$P_{72} = \frac{5}{16}$	$P_{73} = \frac{15}{16}$	$P_{74} = \frac{15}{16}$	$P_{75} = \frac{15}{16}$	$P_{76} = \frac{15}{16}$	$P_{77} = \frac{7}{2}$	$P_{78} = \frac{5}{16}$	$P_{79} = \frac{15}{16}$	$P_{80} = \frac{15}{16}$	$P_{81} = \frac{7}{2}$	$P_{82} = \frac{5}{16}$	$P_{83} = \frac{15}{16}$	$P_{84} = \frac{15}{16}$	$P_{85} = \frac{15}{16}$	$P_{86} = \frac{15}{16}$	$P_{87} = \frac{7}{2}$	$P_{88} = \frac{5}{16}$	$P_{89} = \frac{15}{16}$	$P_{90} = \frac{15}{16}$	$P_{91} = \frac{7}{2}$	$P_{92} = \frac{5}{16}$	$P_{93} = \frac{15}{16}$	$P_{94} = \frac{15}{16}$	$P_{95} = \frac{15}{16}$	$P_{96} = \frac{15}{16}$	$P_{97} = \frac{7}{2}$	$P_{98} = \frac{5}{16}$	$P_{99} = \frac{15}{16}$	$P_{100} = \frac{15}{16}$	$P_{101} = \frac{7}{2}$	$P_{102} = \frac{5}{16}$	$P_{103} = \frac{15}{16}$	$P_{104} = \frac{15}{16}$	$P_{105} = \frac{15}{16}$	$P_{106} = \frac{15}{16}$	$P_{107} = \frac{7}{2}$	$P_{108} = \frac{5}{16}$	$P_{109} = \frac{15}{16}$	$P_{110} = \frac{15}{16}$	$P_{111} = \frac{7}{2}$	$P_{112} = \frac{5}{16}$	$P_{113} = \frac{15}{16}$	$P_{114} = \frac{15}{16}$	$P_{115} = \frac{15}{16}$	$P_{116} = \frac{15}{16}$	$P_{117} = \frac{7}{2}$	$P_{118} = \frac{5}{16}$	$P_{119} = \frac{15}{16}$	$P_{120} = \frac{15}{16}$	$P_{121} = \frac{7}{2}$	$P_{122} = \frac{5}{16}$	$P_{123} = \frac{15}{16}$	$P_{124} = \frac{15}{16}$	$P_{125} = \frac{15}{16}$	$P_{126} = \frac{15}{16}$	$P_{127} = \frac{7}{2}$	$P_{128} = \frac{5}{16}$	$P_{129} = \frac{15}{16}$	$P_{130} = \frac{15}{16}$	$P_{131} = \frac{7}{2}$	$P_{132} = \frac{5}{16}$	$P_{133} = \frac{15}{16}$	$P_{134} = \frac{15}{16}$	$P_{135} = \frac{15}{16}$	$P_{136} = \frac{15}{16}$	$P_{137} = \frac{7}{2}$	$P_{138} = \frac{5}{16}$	$P_{139} = \frac{15}{16}$	$P_{140} = \frac{15}{16}$	$P_{141} = \frac{7}{2}$	$P_{142} = \frac{5}{16}$	$P_{143} = \frac{15}{16}$	$P_{144} = \frac{15}{16}$	$P_{145} = \frac{15}{16}$	$P_{146} = \frac{15}{16}$	$P_{147} = \frac{7}{2}$	$P_{148} = \frac{5}{16}$	$P_{149} = \frac{15}{16}$	$P_{150} = \frac{15}{16}$	$P_{151} = \frac{7}{2}$	$P_{152} = \frac{5}{16}$	$P_{153} = \frac{15}{16}$	$P_{154} = \frac{15}{16}$	$P_{155} = \frac{15}{16}$	$P_{156} = \frac{15}{16}$	$P_{157} = \frac{7}{2}$	$P_{158} = \frac{5}{16}$	$P_{159} = \frac{15}{16}$	$P_{160} = \frac{15}{16}$	$P_{161} = \frac{7}{2}$	$P_{162} = \frac{5}{16}$	$P_{163} = \frac{15}{16}$	$P_{164} = \frac{15}{16}$	$P_{165} = \frac{15}{16}$	$P_{166} = \frac{15}{16}$	$P_{167} = \frac{7}{2}$	$P_{168} = \frac{5}{16}$	$P_{169} = \frac{15}{16}$	$P_{170} = \frac{15}{16}$	$P_{171} = \frac{7}{2}$	$P_{172} = \frac{5}{16}$	$P_{173} = \frac{15}{16}$	$P_{174} = \frac{15}{16}$	$P_{175} = \frac{15}{16}$	$P_{176} = \frac{15}{16}$	$P_{177} = \frac{7}{2}$	$P_{178} = \frac{5}{16}$	$P_{179} = \frac{15}{16}$	$P_{180} = \frac{15}{16}$	$P_{181} = \frac{7}{2}$	$P_{182} = \frac{5}{16}$	$P_{183} = \frac{15}{16}$	$P_{184} = \frac{15}{16}$	$P_{185} = \frac{15}{16}$	$P_{186} = \frac{15}{16}$	$P_{187} = \frac{7}{2}$	$P_{188} = \frac{5}{16}$	$P_{189} = \frac{15}{16}$	$P_{190} = \frac{15}{16}$	$P_{191} = \frac{7}{2}$	$P_{192} = \frac{5}{16}$	$P_{193} = \frac{15}{16}$	P_{194
-------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	--------------------------	--------------------------	--------------------------	------------------------	-------------------------	--------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	---------------------------	-------------------------	--------------------------	---------------------------	----------

$$t = N\mathbf{1}$$
[illegible]

Finally, we see that $t_0 = \boxed{\frac{213}{29} \approx 7.345}$