# Worksheet: Pointer Skipping

You are given a linked list, and you need to compute the **rank** of each element of the list, i.e. the distance of that element from the end of the list.

Give a high-level idea of how would you solve this problem in parallel using pointer skipping. You can assume that the list is stored in a contiguous array, with a pointer to the next element in the list being a simple index of that element. For example, the following array:

A	0	1	B	0	3	F	0	⊥	C	0	5	E	0	3	D	0	4
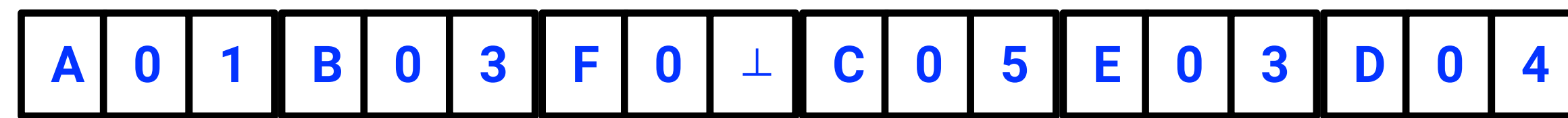
Represents the following list:
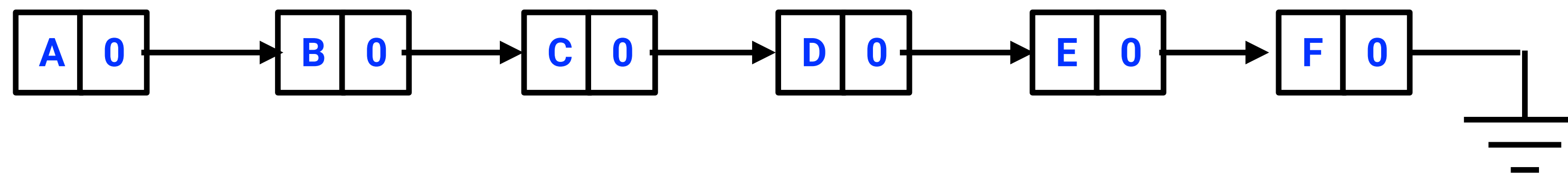
What is the total WORK that your solution would perform (integer addition counts as WORK(1), everything else is ignored)?
For a list of length 2048, what is the minimum number of processors you need in order for your parallel algorithm to beat a sequential one?