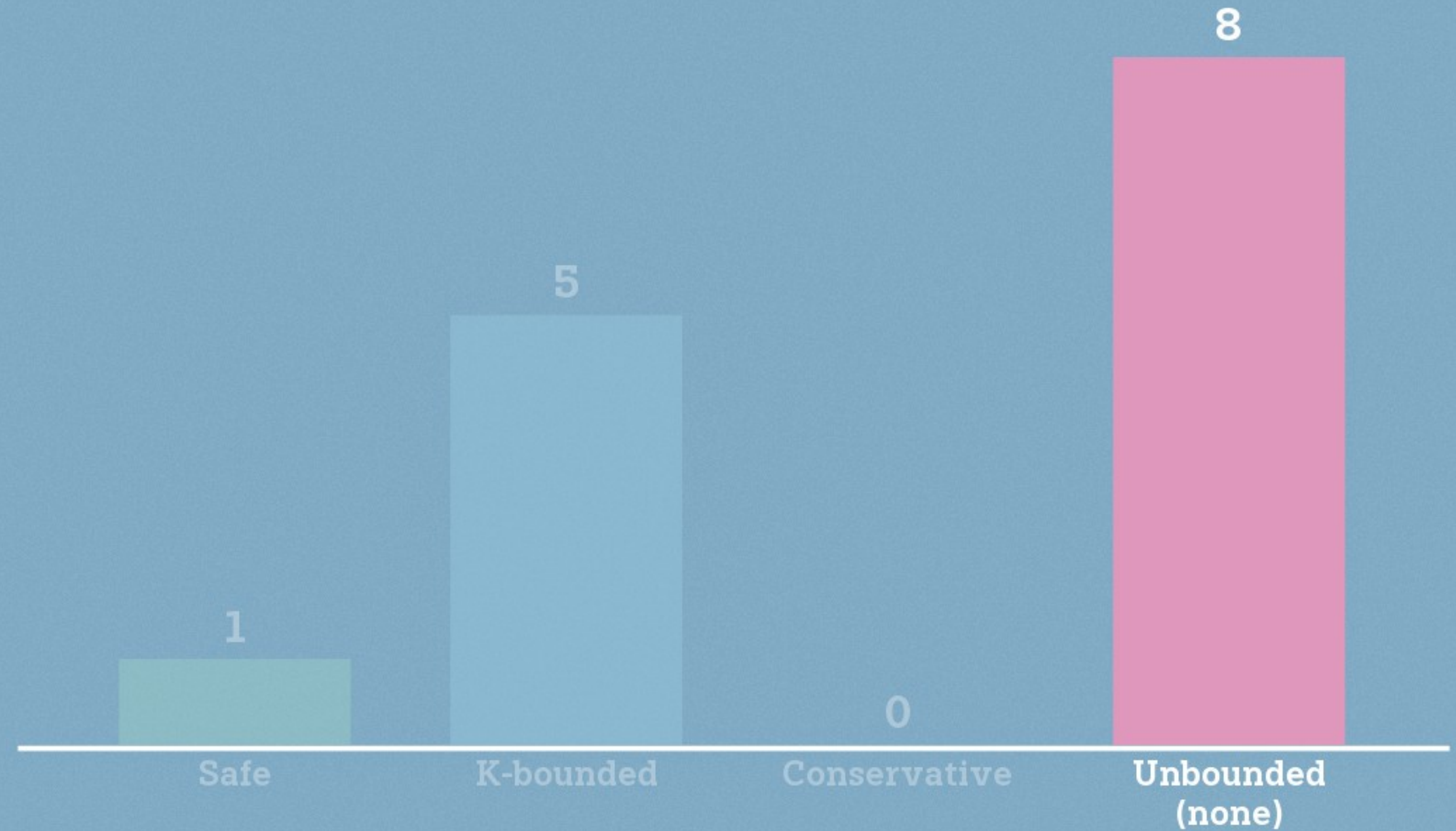
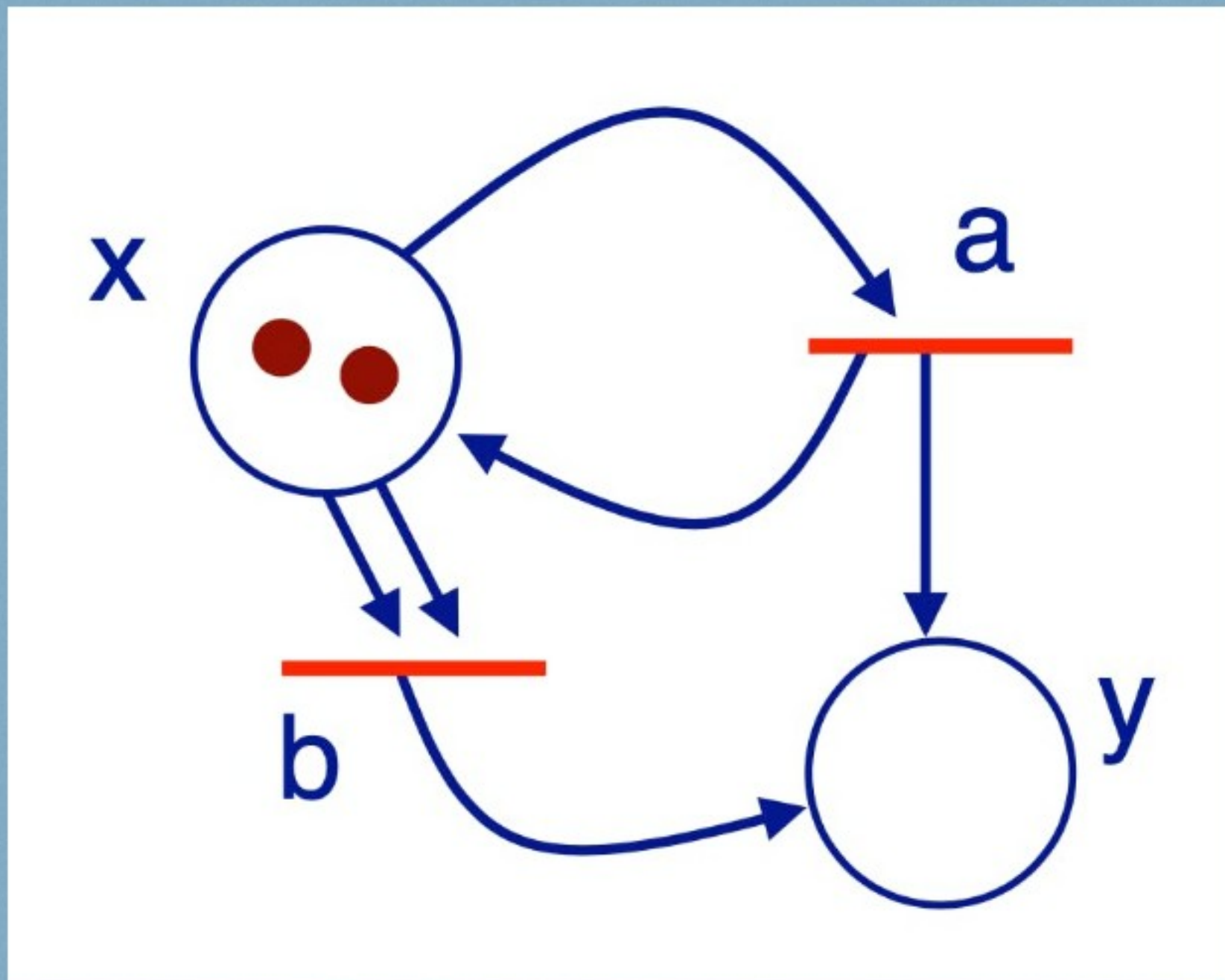


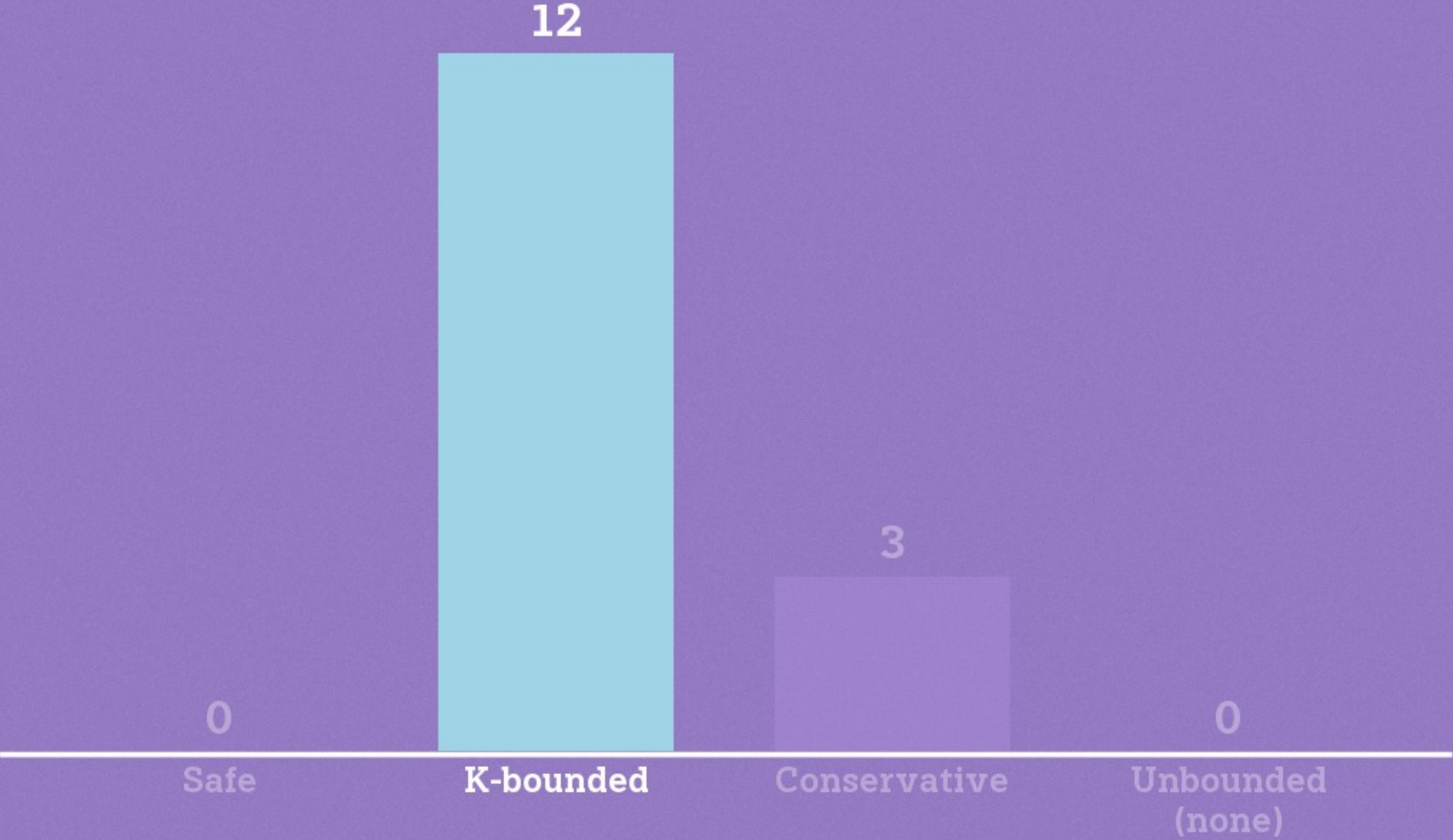
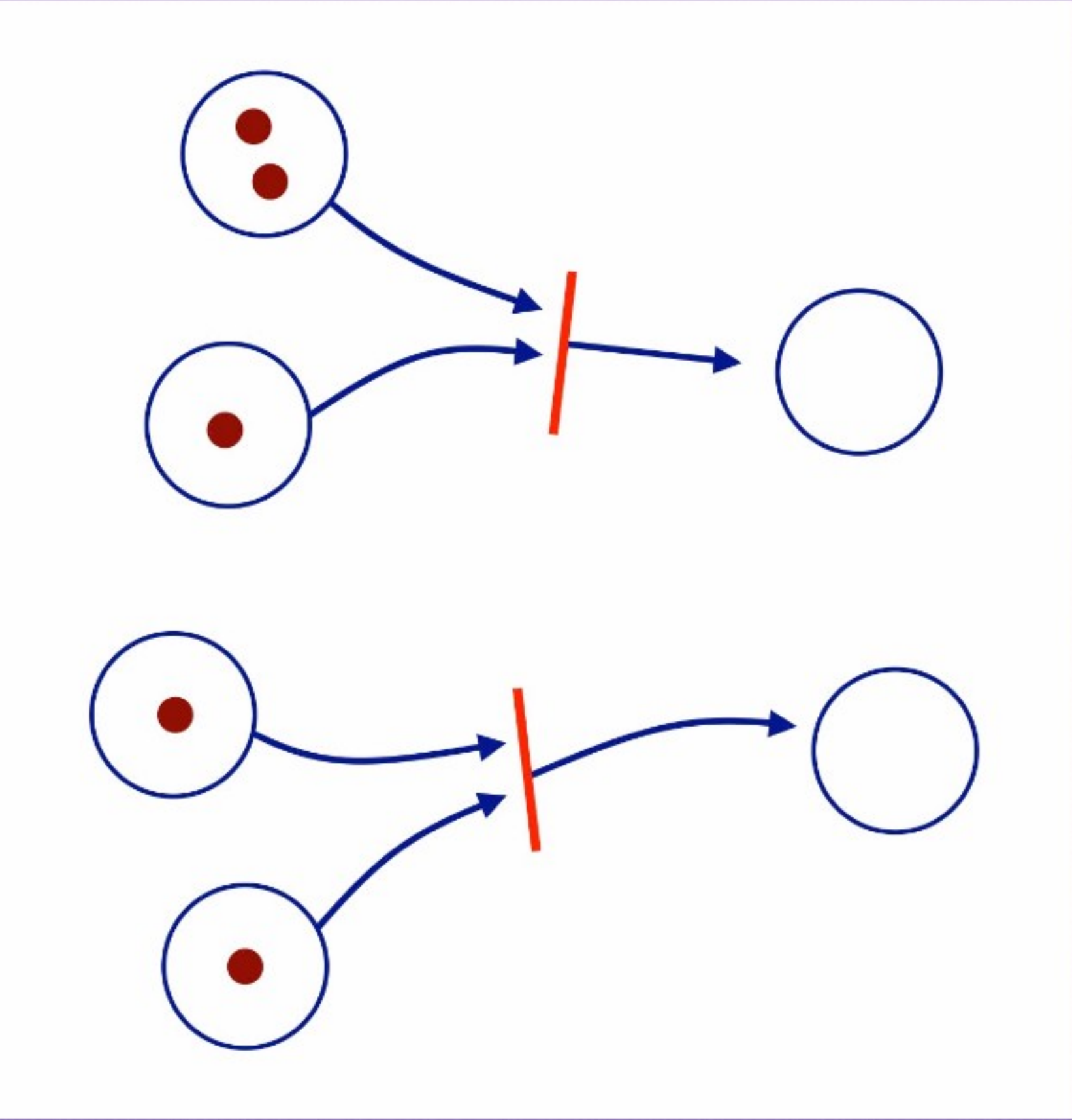
Ask me anything

4 questions
0 upvotes

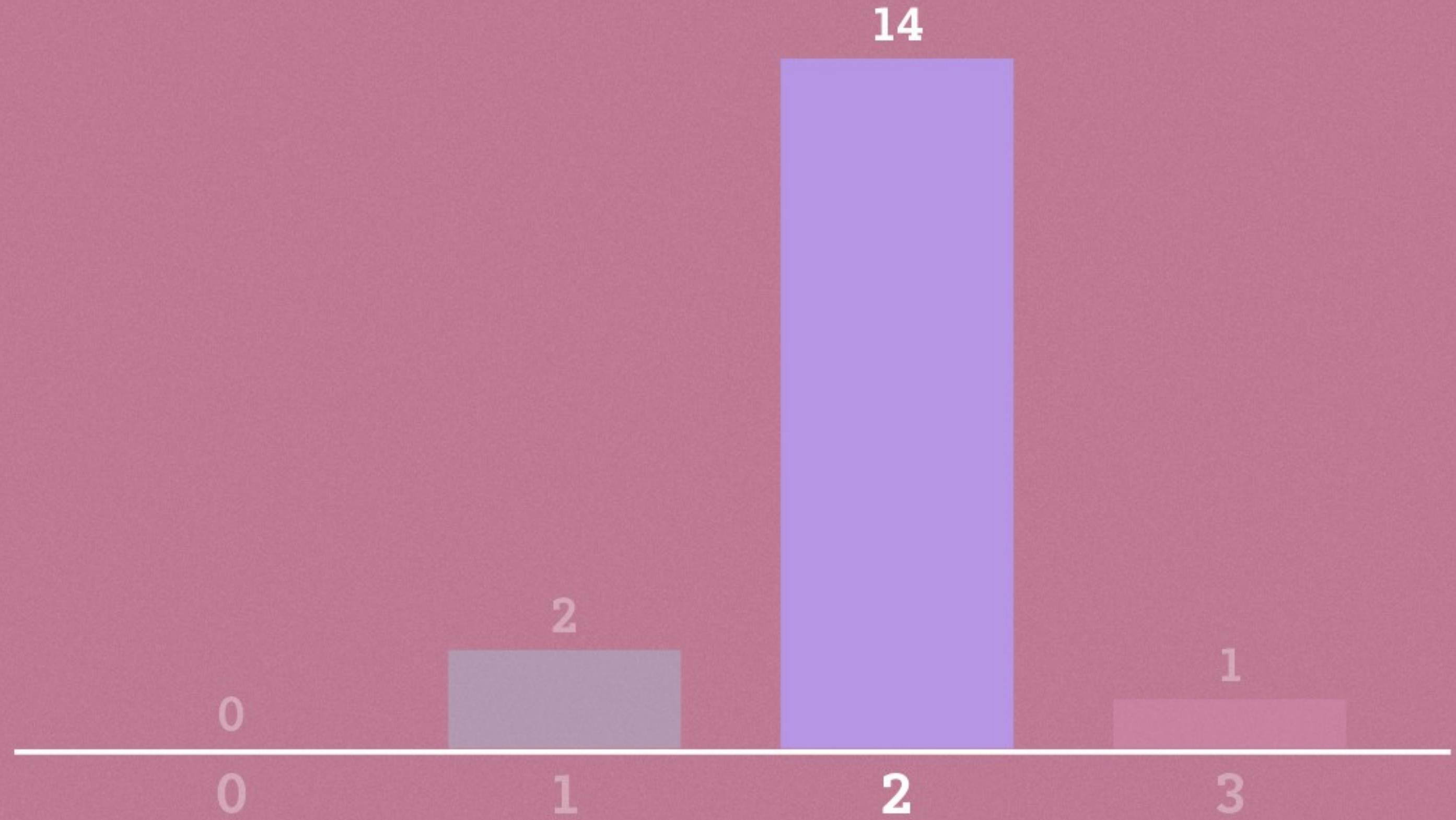
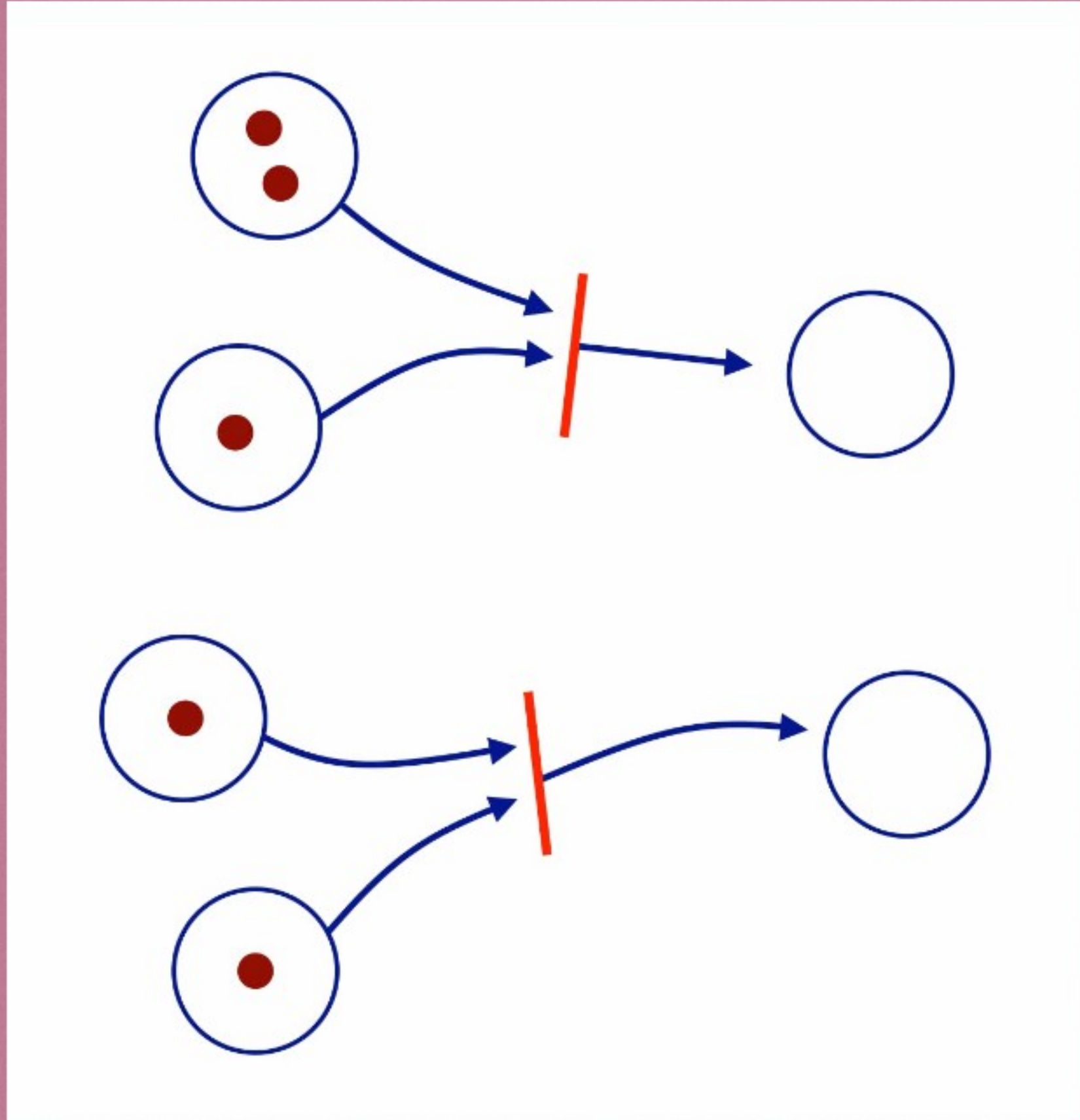
Is this Petri net safe / k-bounded / conservative?



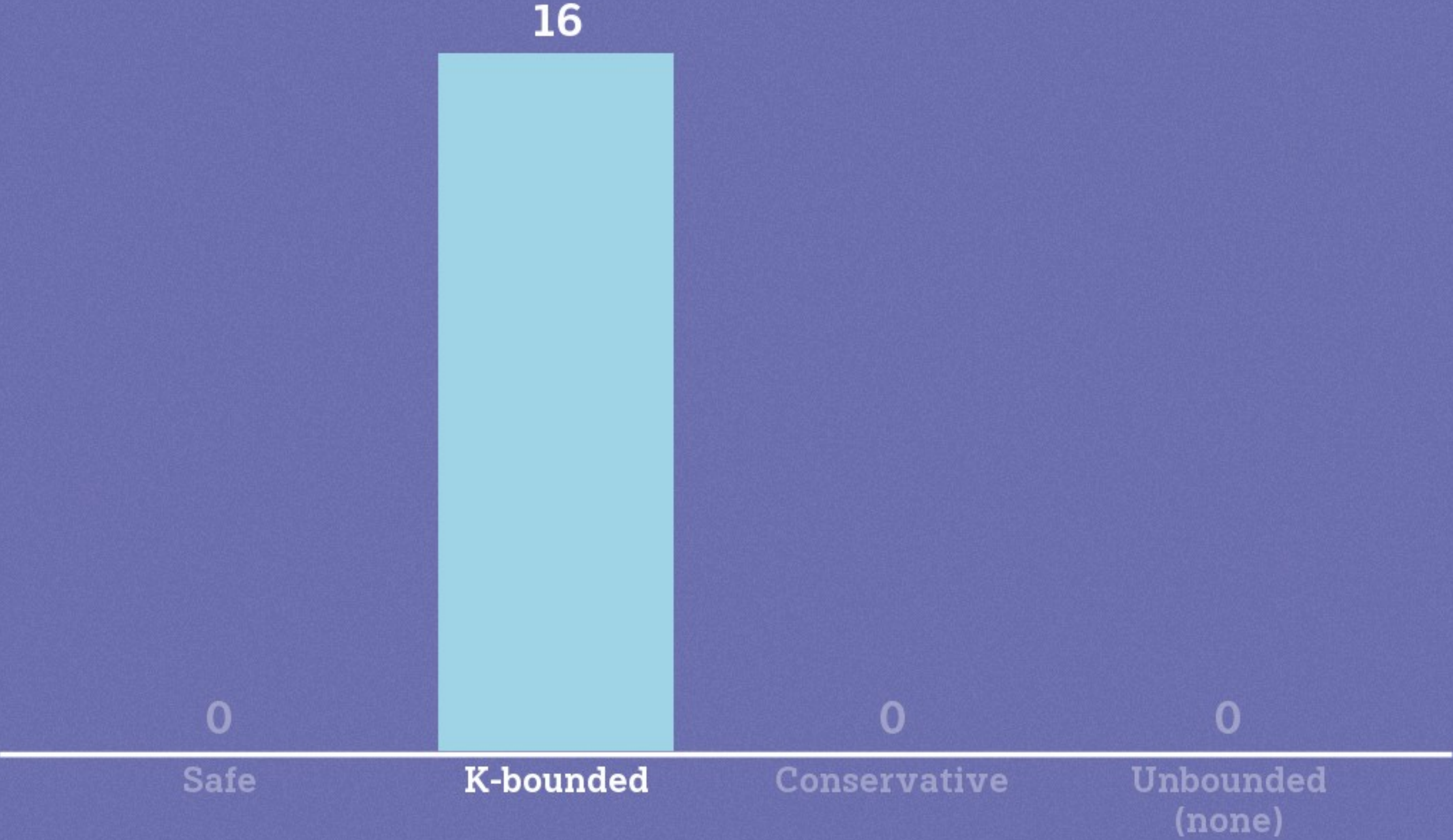
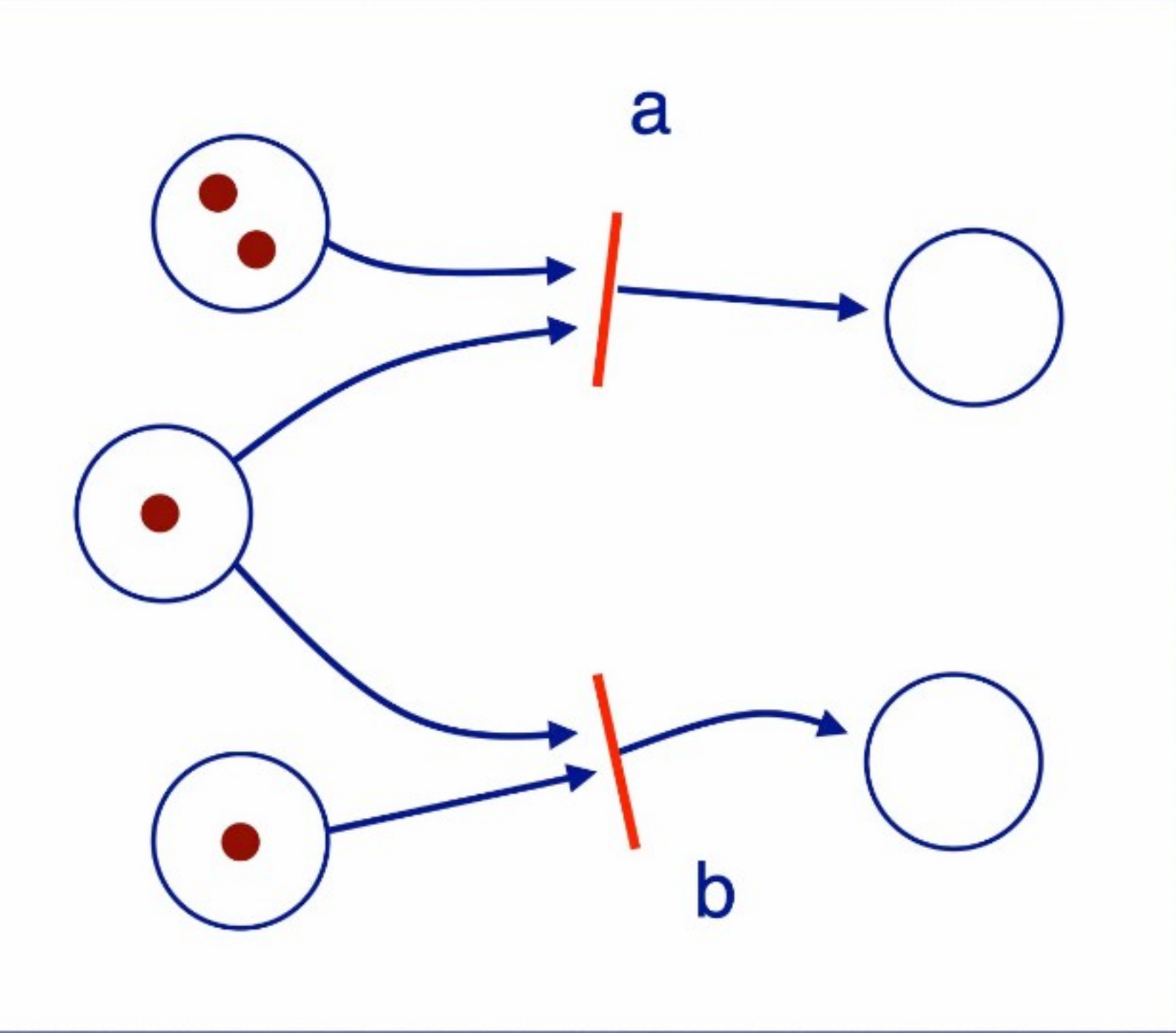
Is this Petri net safe / k-bounded / conservative?



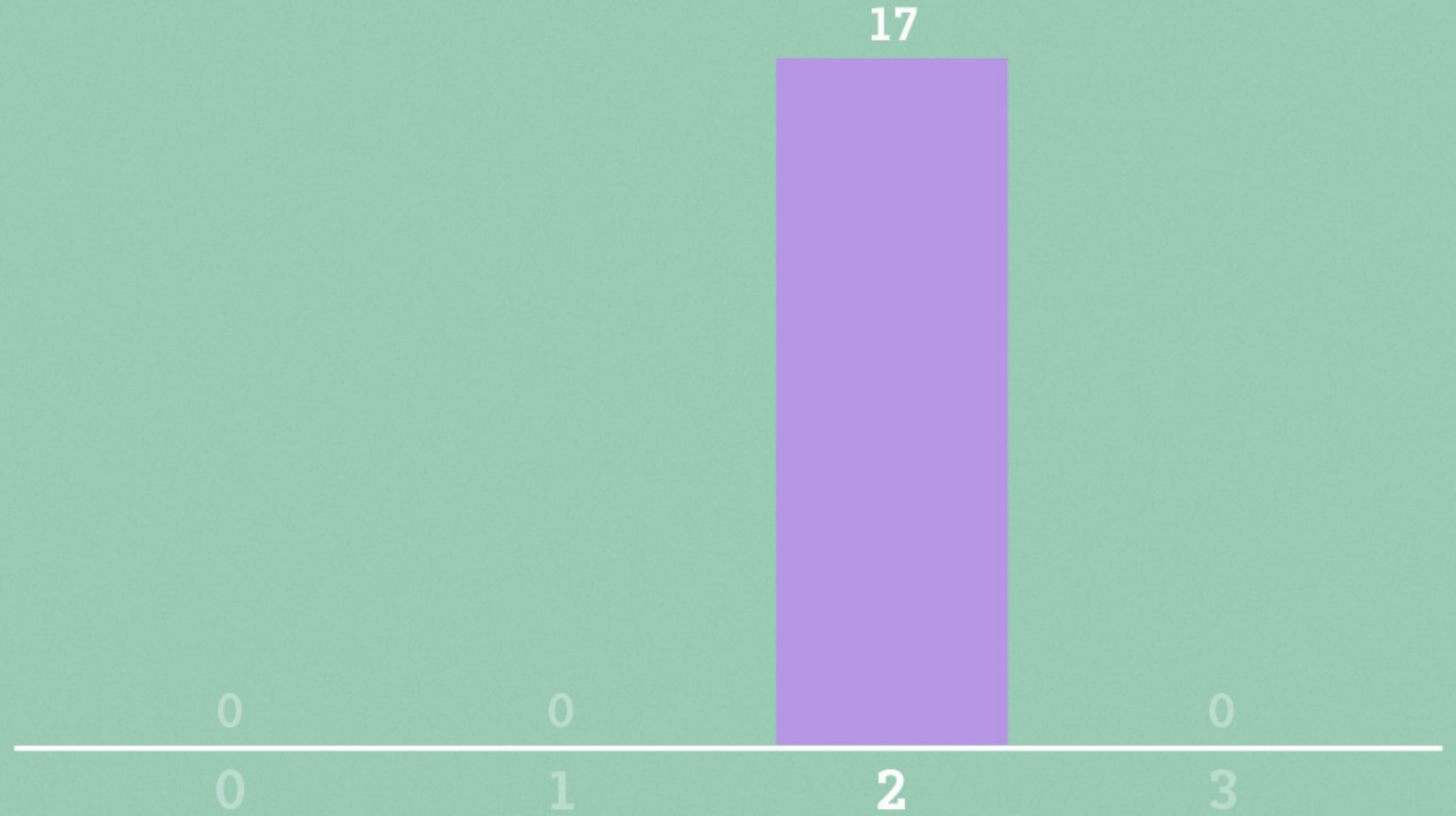
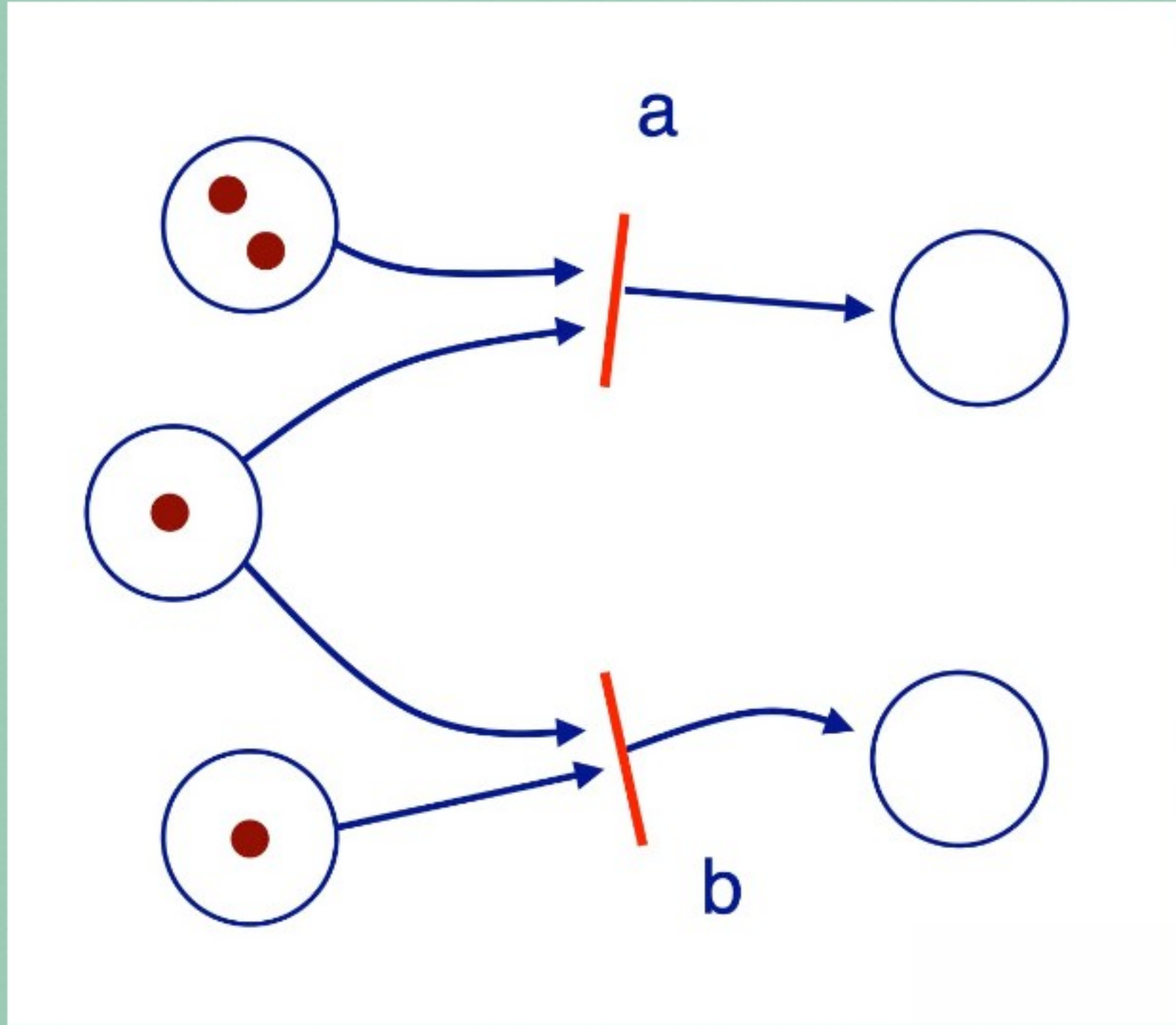
What is the k-bound of this net?



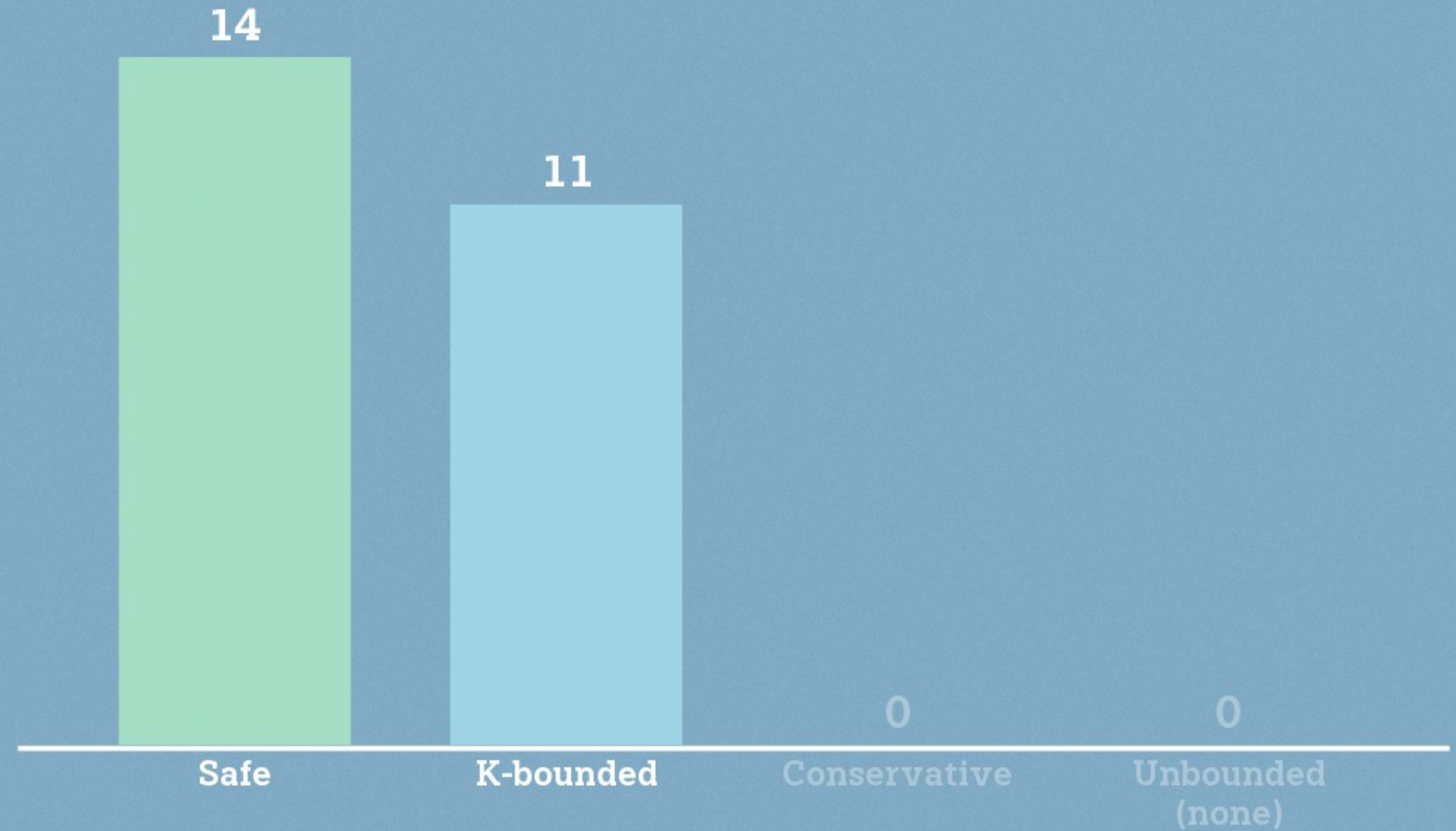
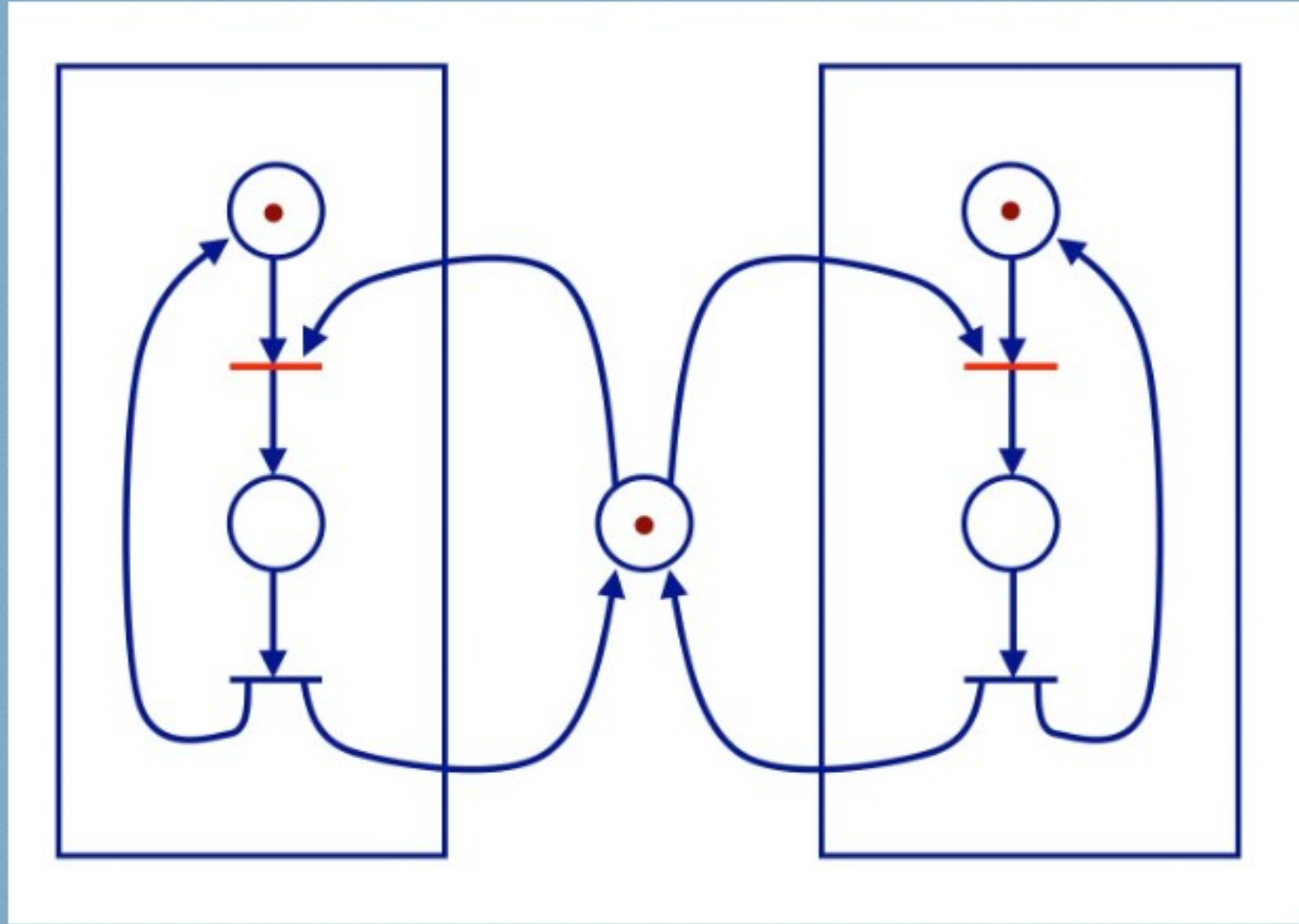
Is this Petri net safe / k-bounded / conservative?



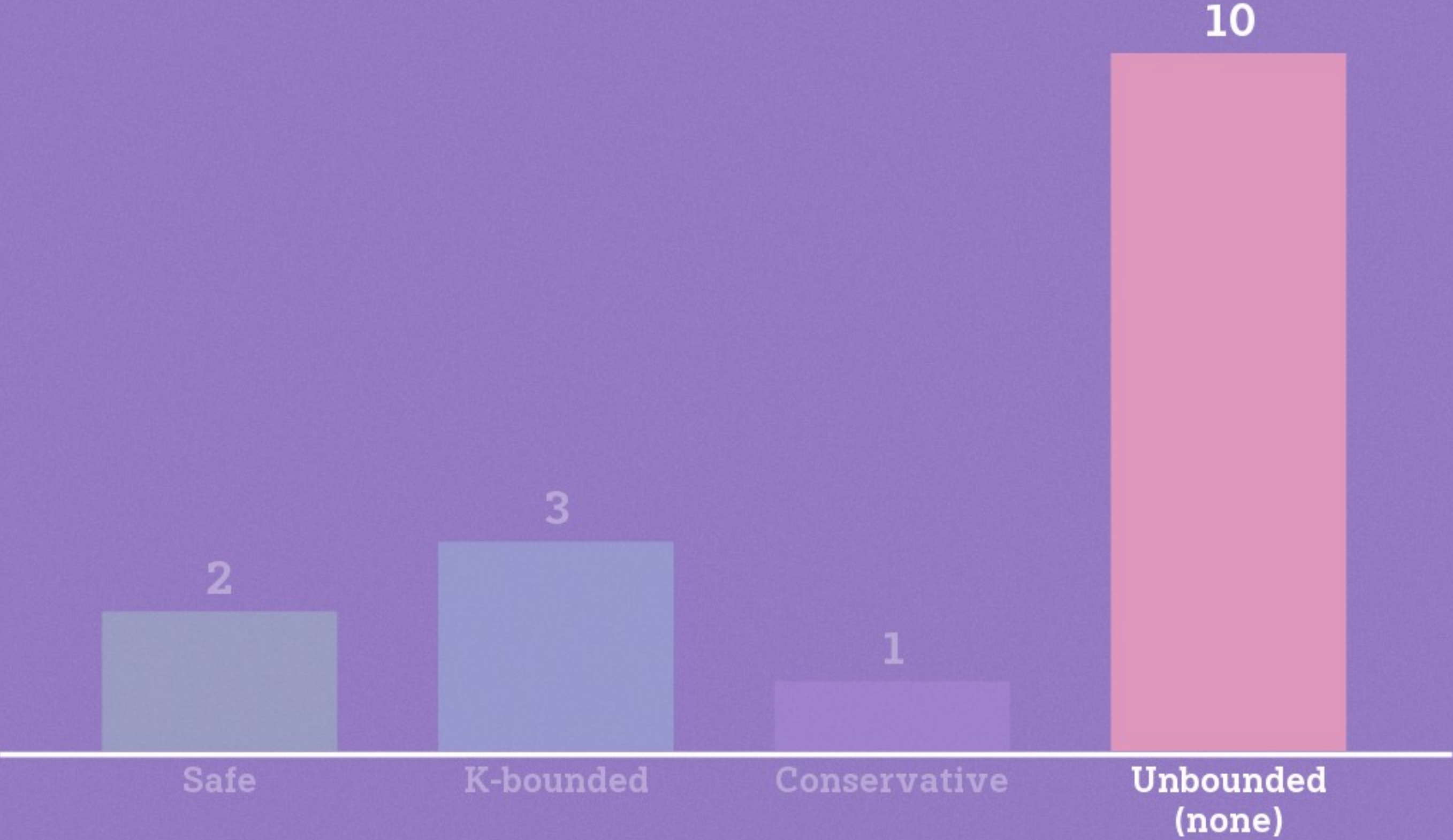
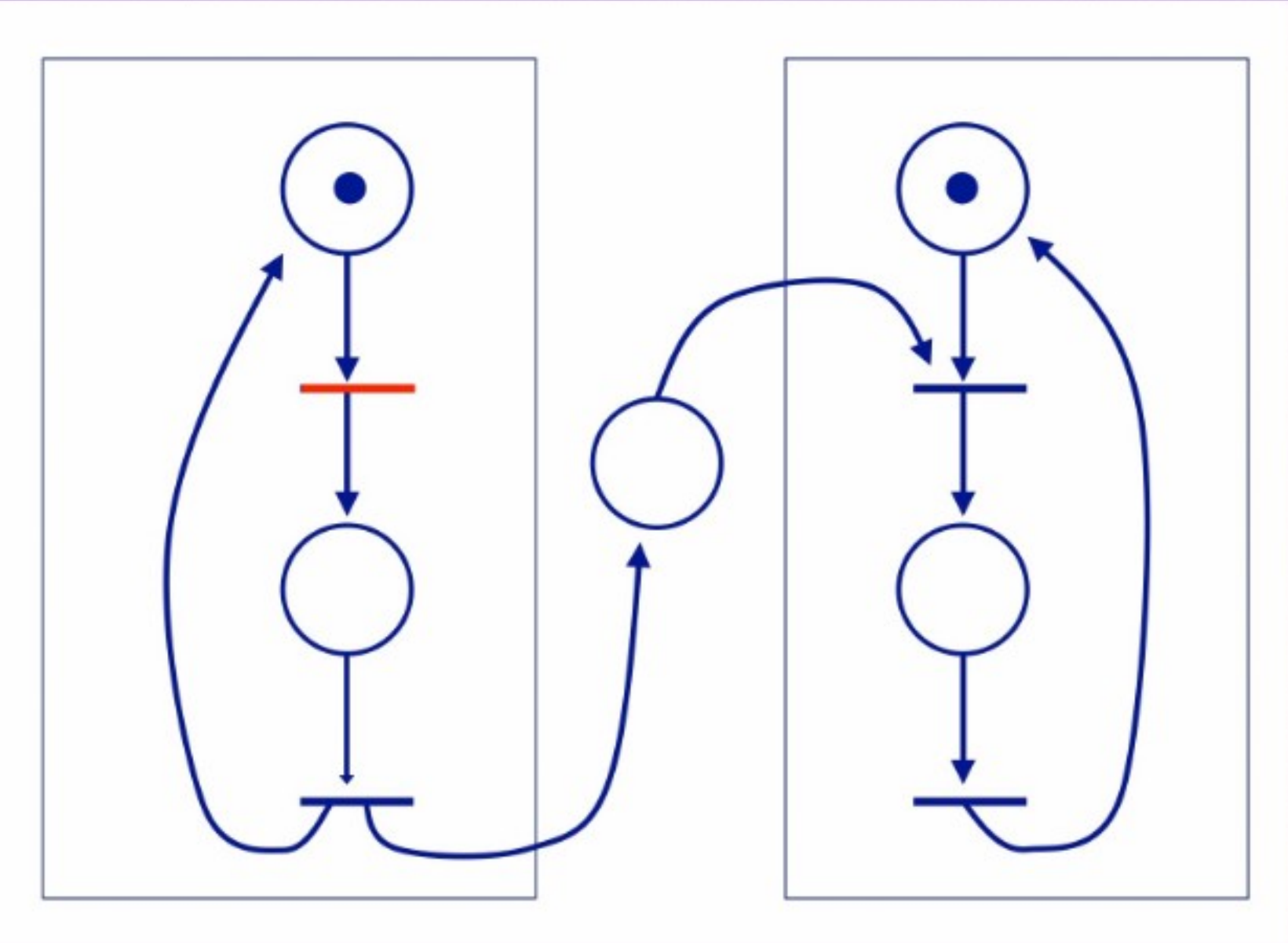
What is the k-bound of this net?



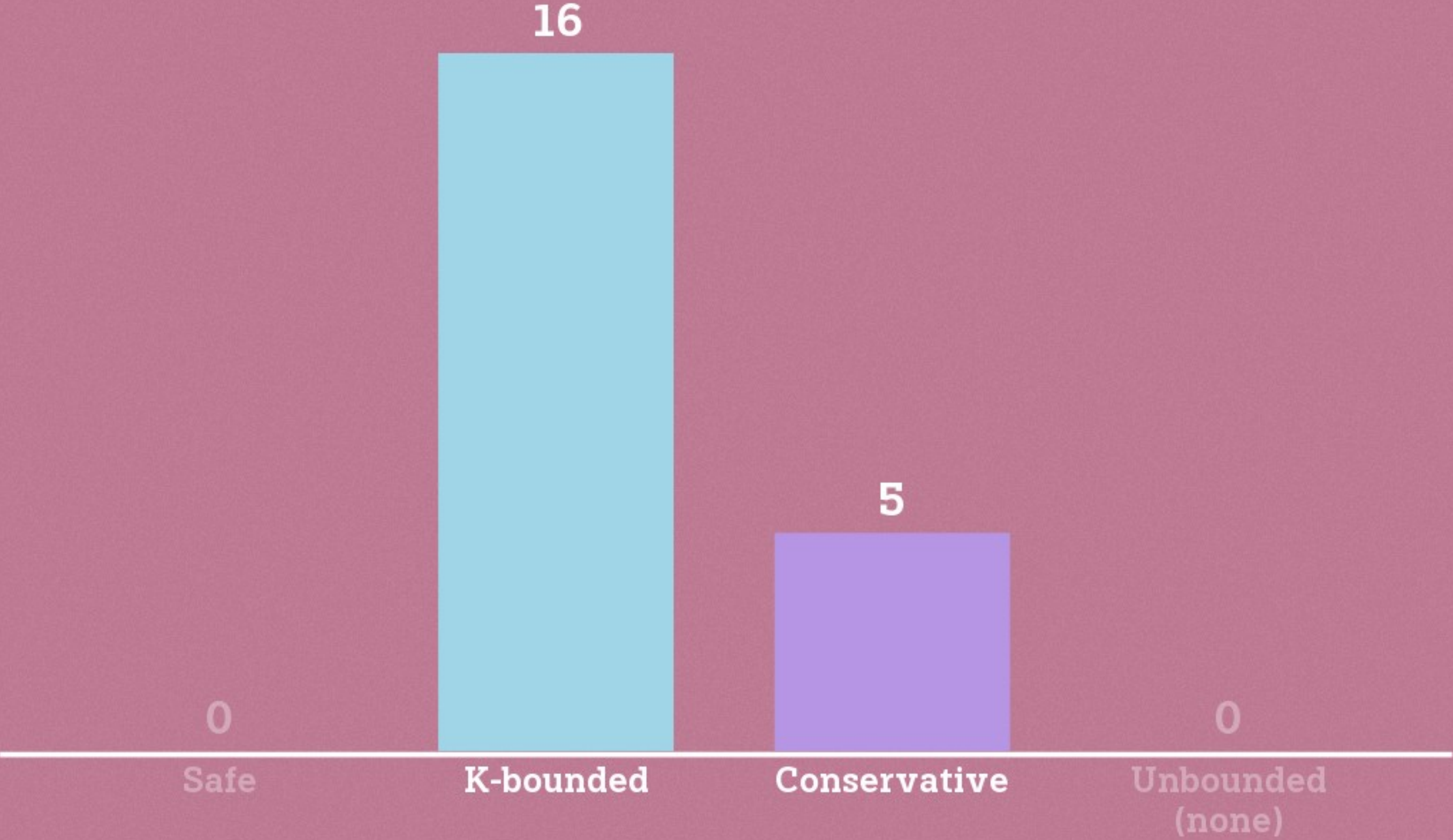
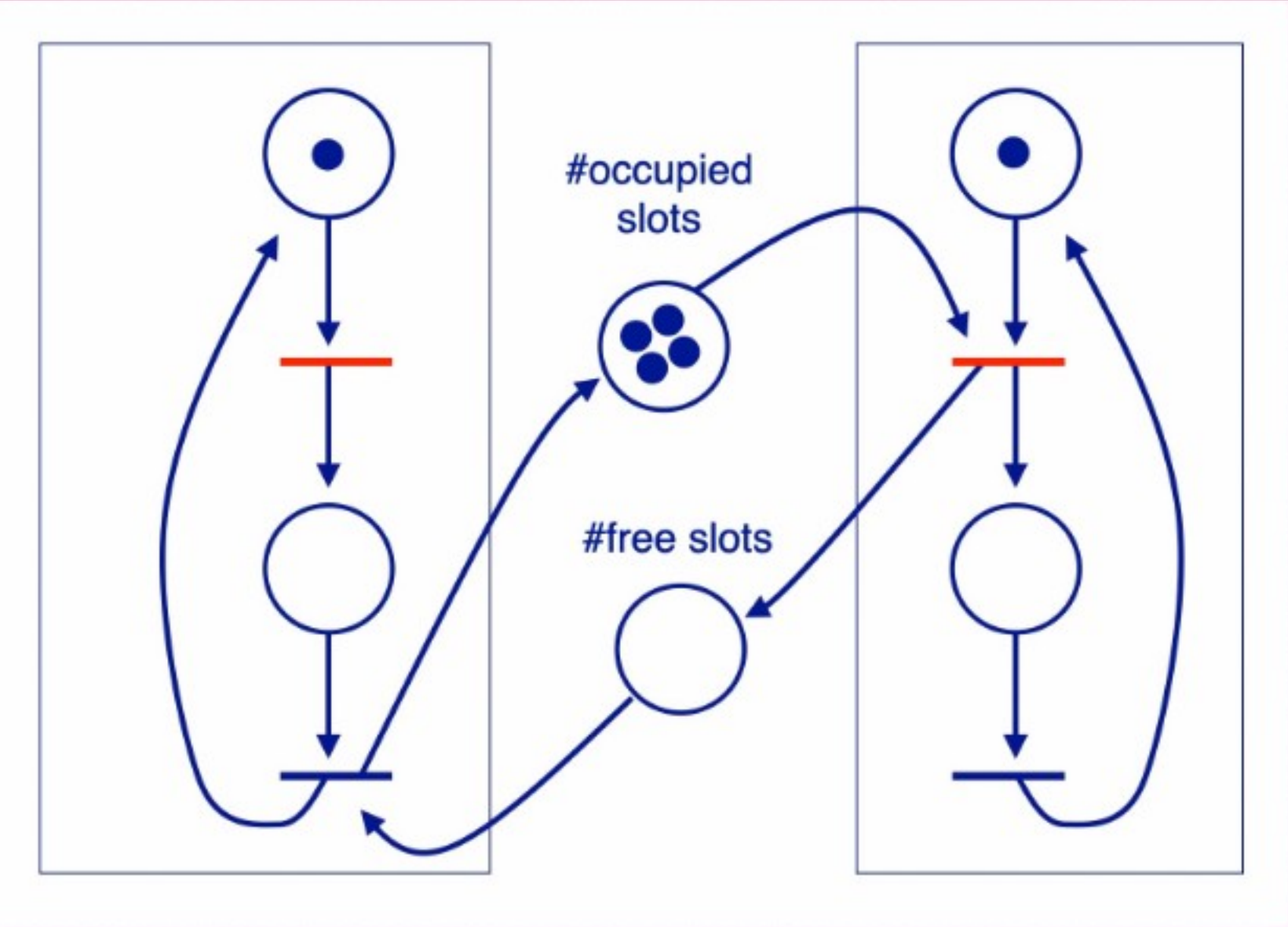
Is this Petri net safe / k-bounded / conservative?



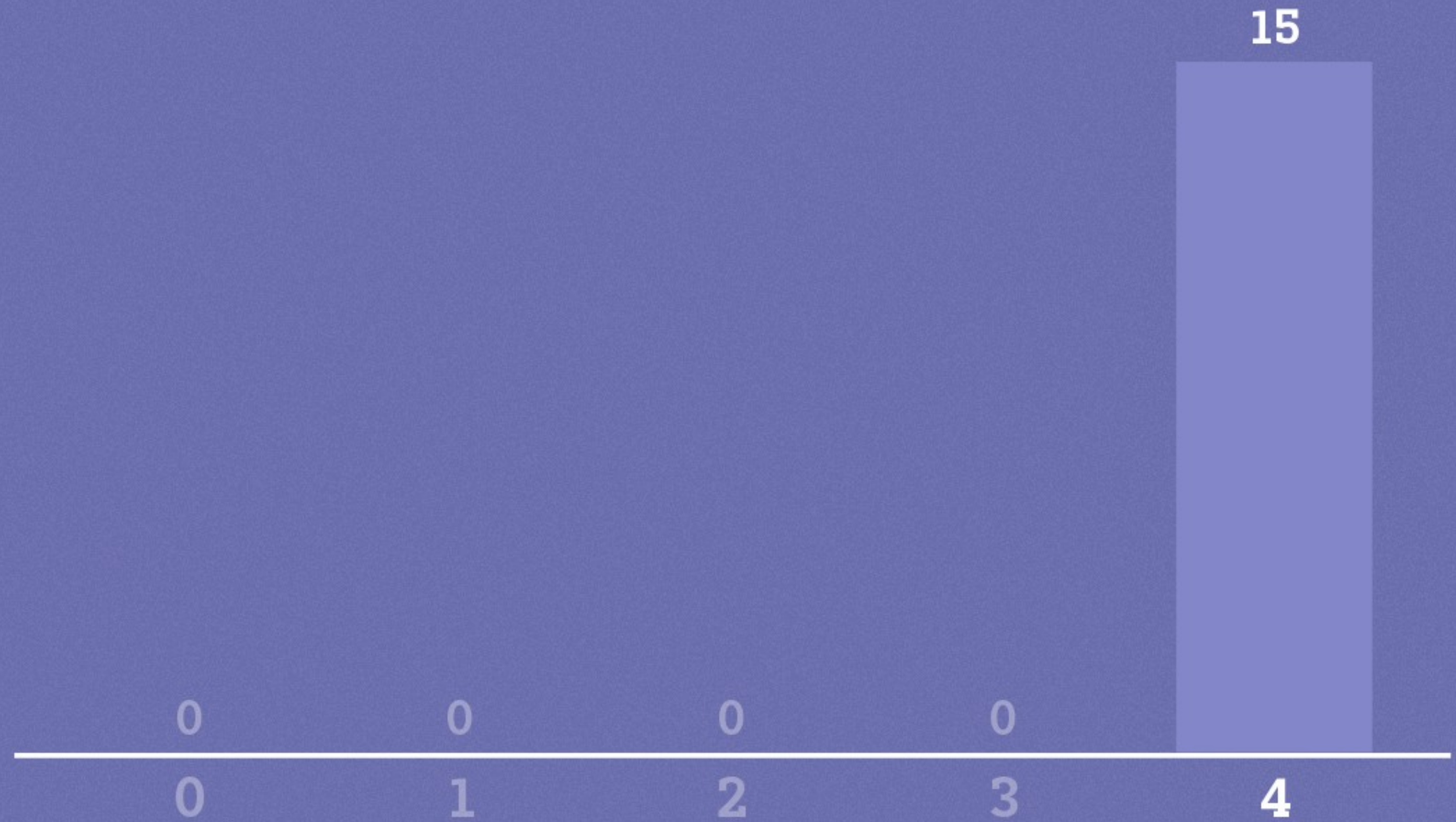
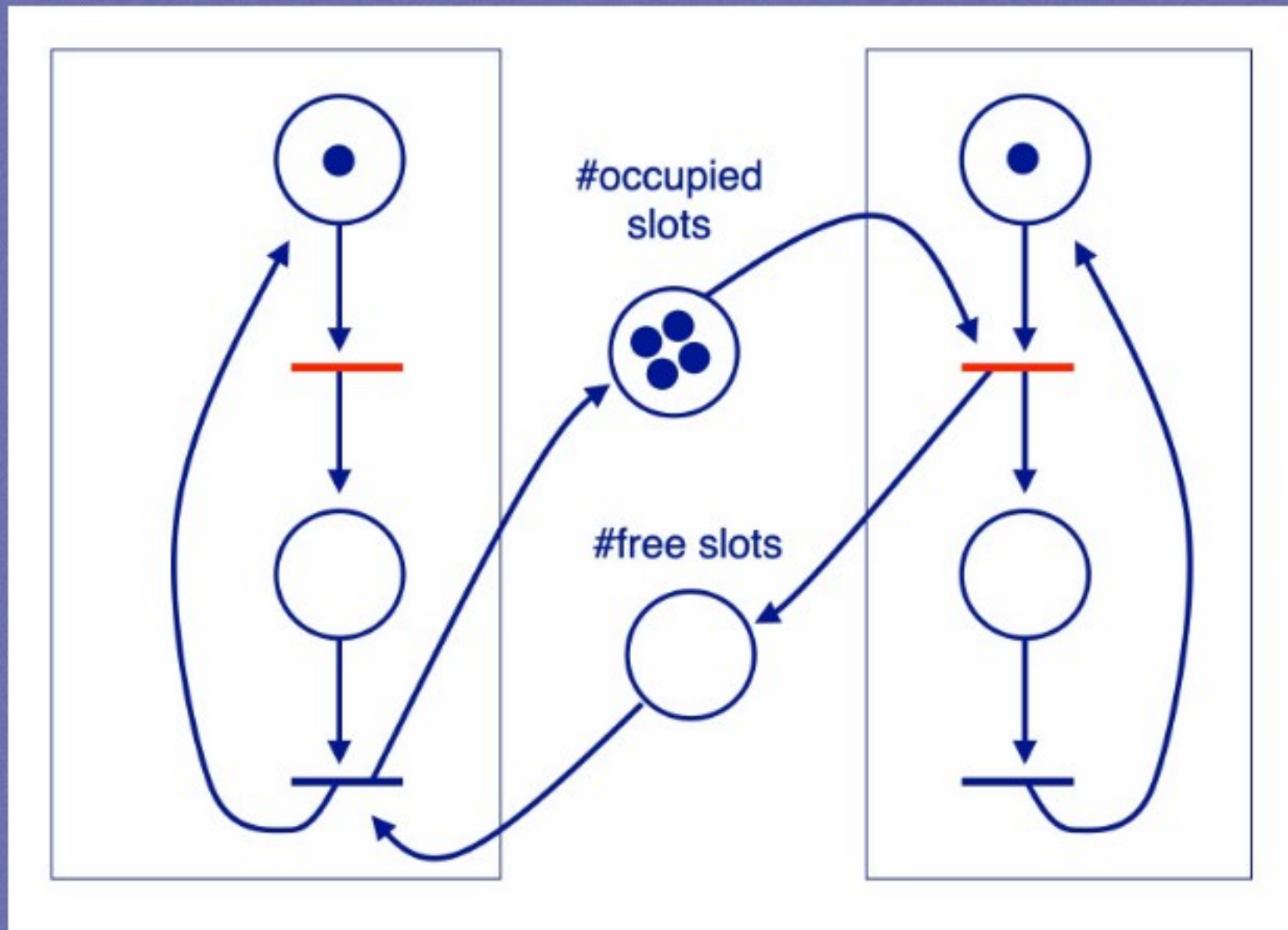
Is this Petri net safe / k-bounded / conservative?



Is this Petri net safe / k-bounded / conservative?



What is the k-bound of this net?



Are conservative nets necessarily k-bounded? Is the reverse true?

Yes. The reverse is not true however.

yes, no

yes. since the total number of tokens needs to stay constant. the max k bound is the total number of tokens

conservative nets are necessarily k-bounded but the opposite isn't true

yes, as they have a constant amount of tokens

Yes, but not the reverse

Conservative nets are k-bounded because the amount of tokens stays the same. The opposite is not necessarily the case

Conservative nets are necessarily k-bounded but k-bounded nets are not conservative.

Yes, a conservative net can not change the amount of tokens. However, the reverse is not true.

Are conservative nets necessarily k-bounded? Is the reverse true?

Yes, the number of markings can not increase in a conservative net. So the initial maximal marking is the k-bound.

conservaitve => k-bounded. Number of tokens is the bound. K-bounded nets' token count may vary though - it just has a maximum of k.

In my opinion a conservative net is k-bounded but a k-bounded net is not conservative.

Do either conservative or k-bounded nets have finite reachability sets?

Not necessarily

No, it can have infinite reachability set

Both have finite reachability sets

Both are true. The resulting reachability graphs will be finite. The contrapositive is easier to show that an infinite reachability set implies no k-bound (thus for sure no conservativeness.)

since in both cases, we've a bound and there's only finite transitions and places, we have a finite number of reachability sets

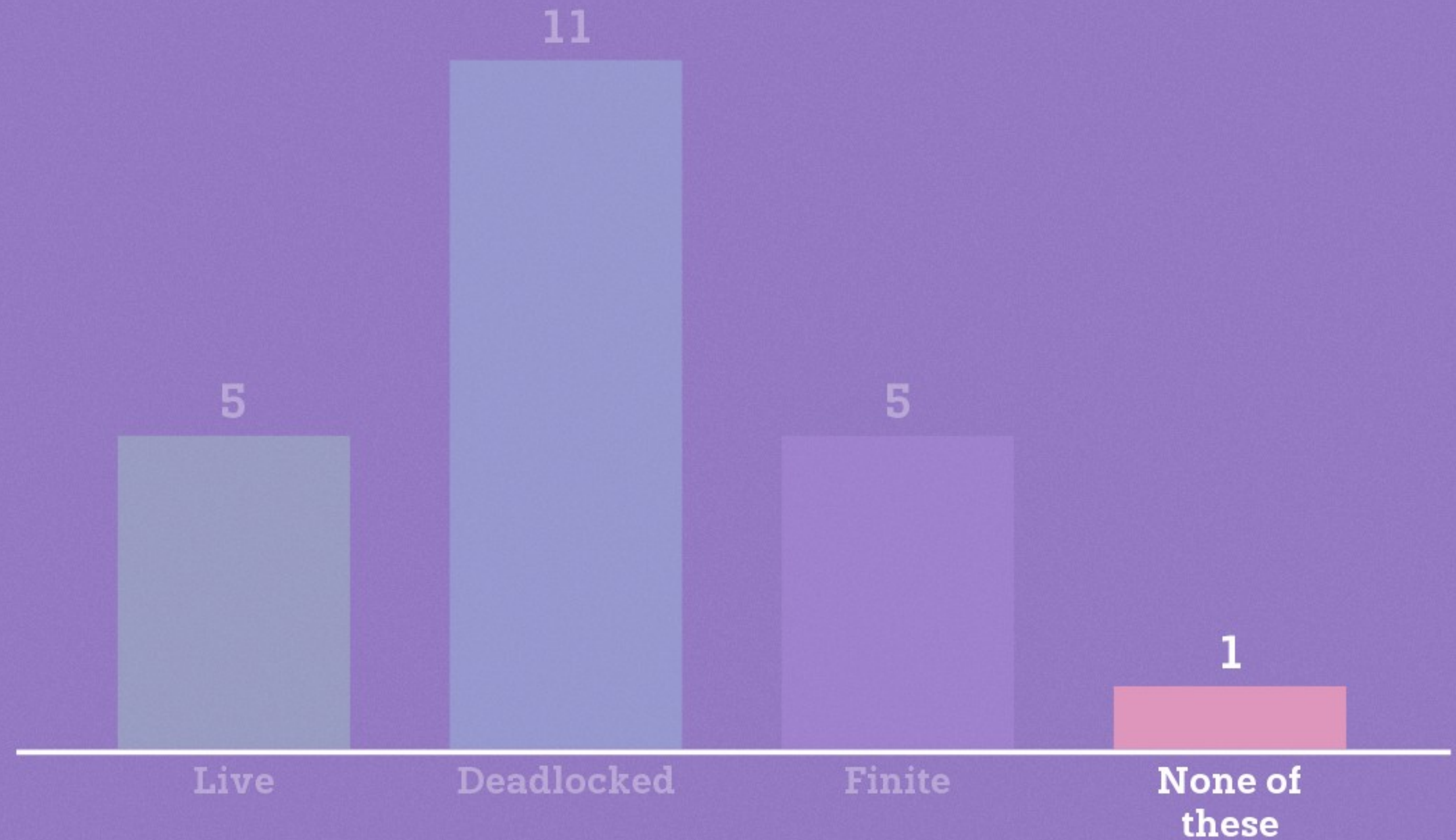
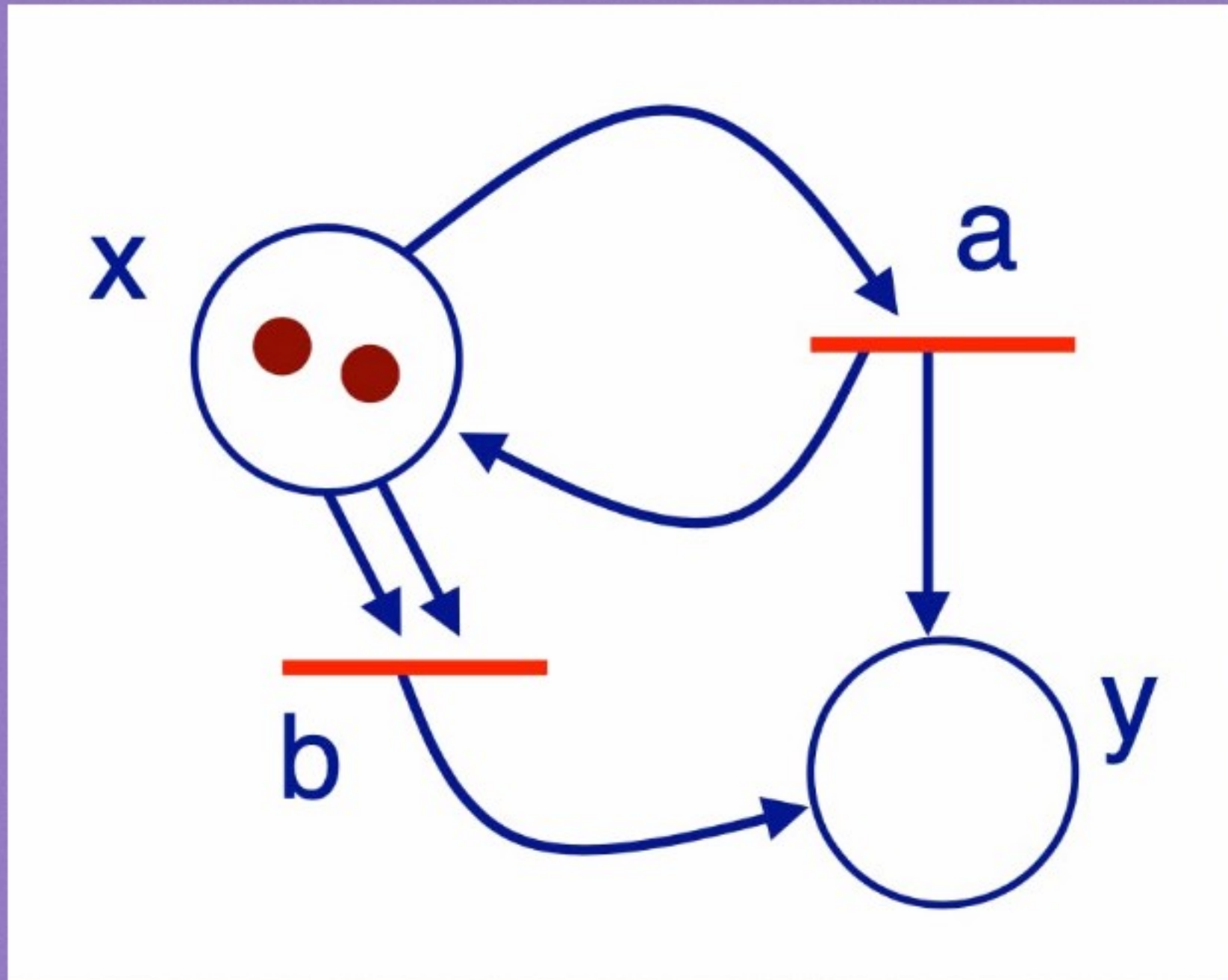
In my opinion only k-bounded nets can have final reachability set but it's not mandatory.

Yes, if the Petri Net itself is finite.

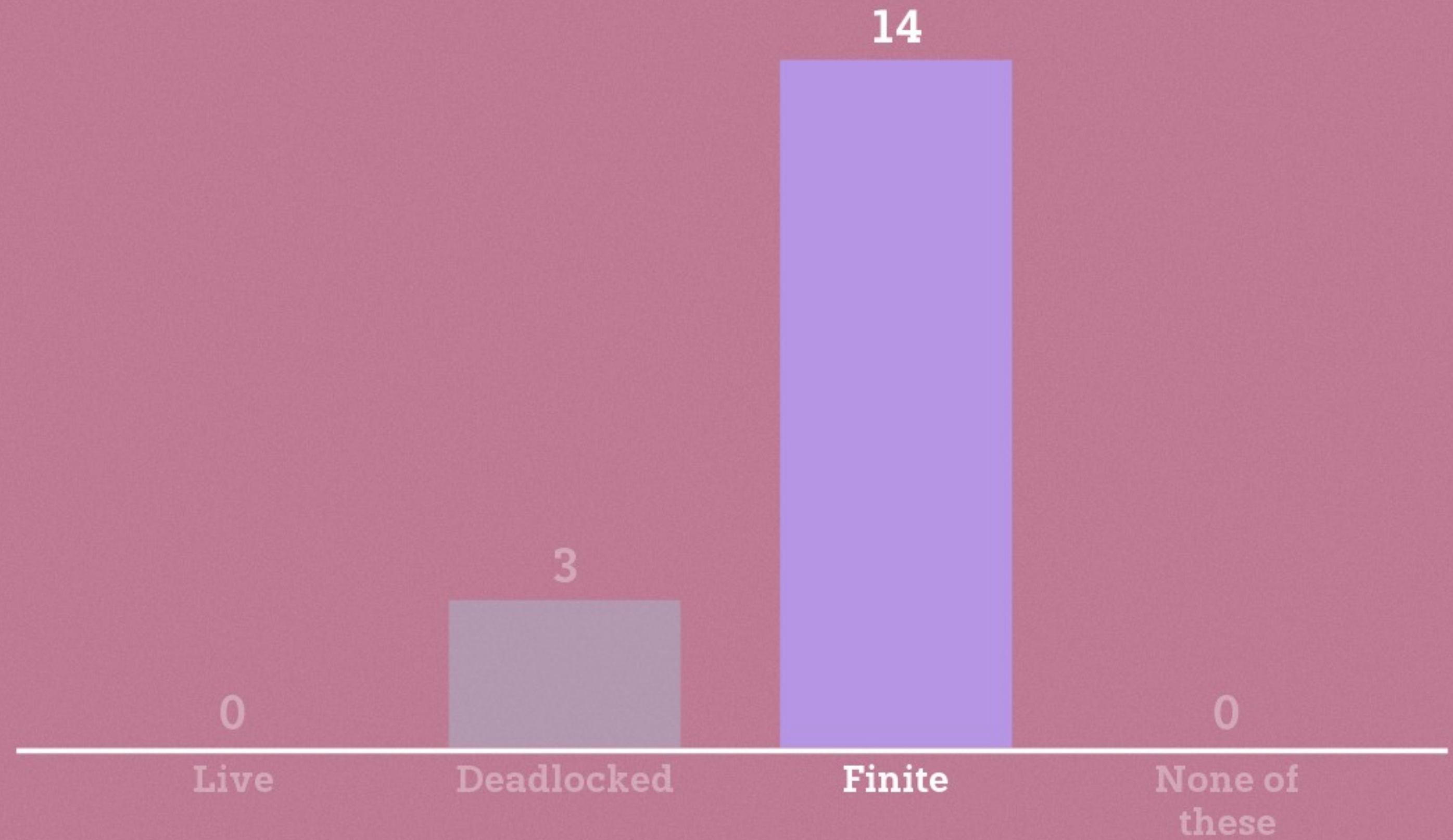
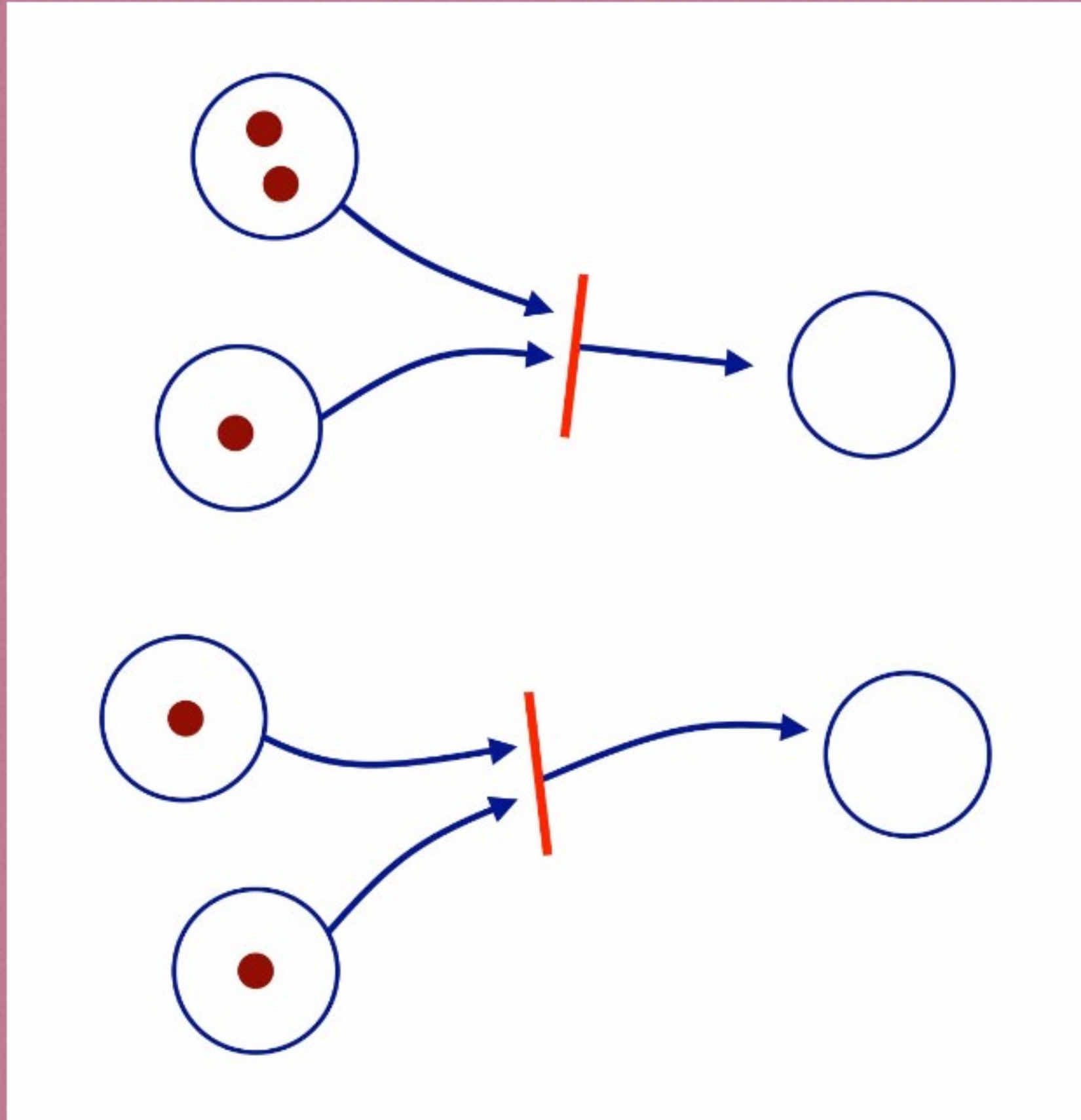
The whole net may be the reachability set

A k-bounded net must have a finite reachability set, at maximum it contains all markings with all combinations of $1..k$ tokens in any place.

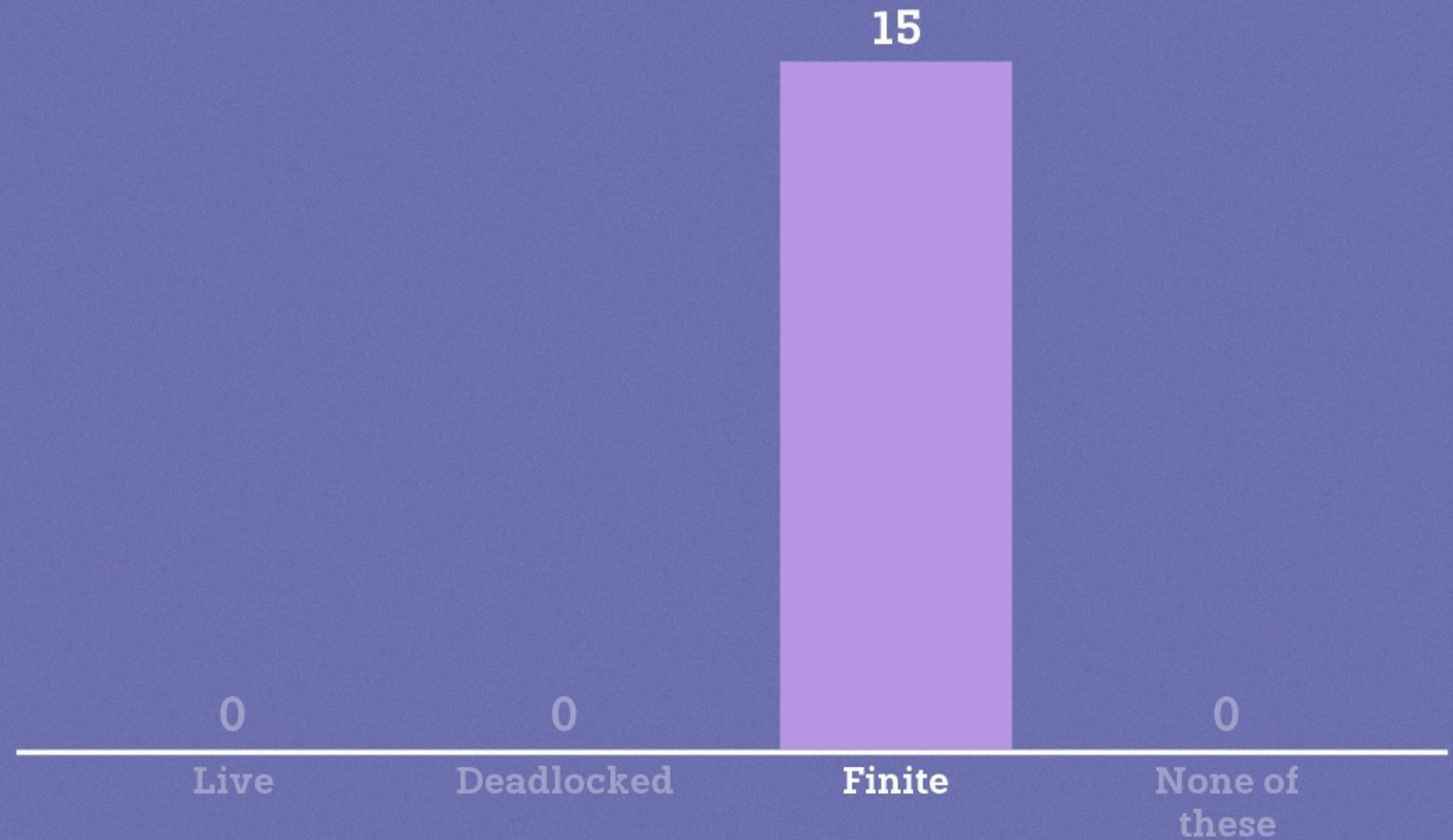
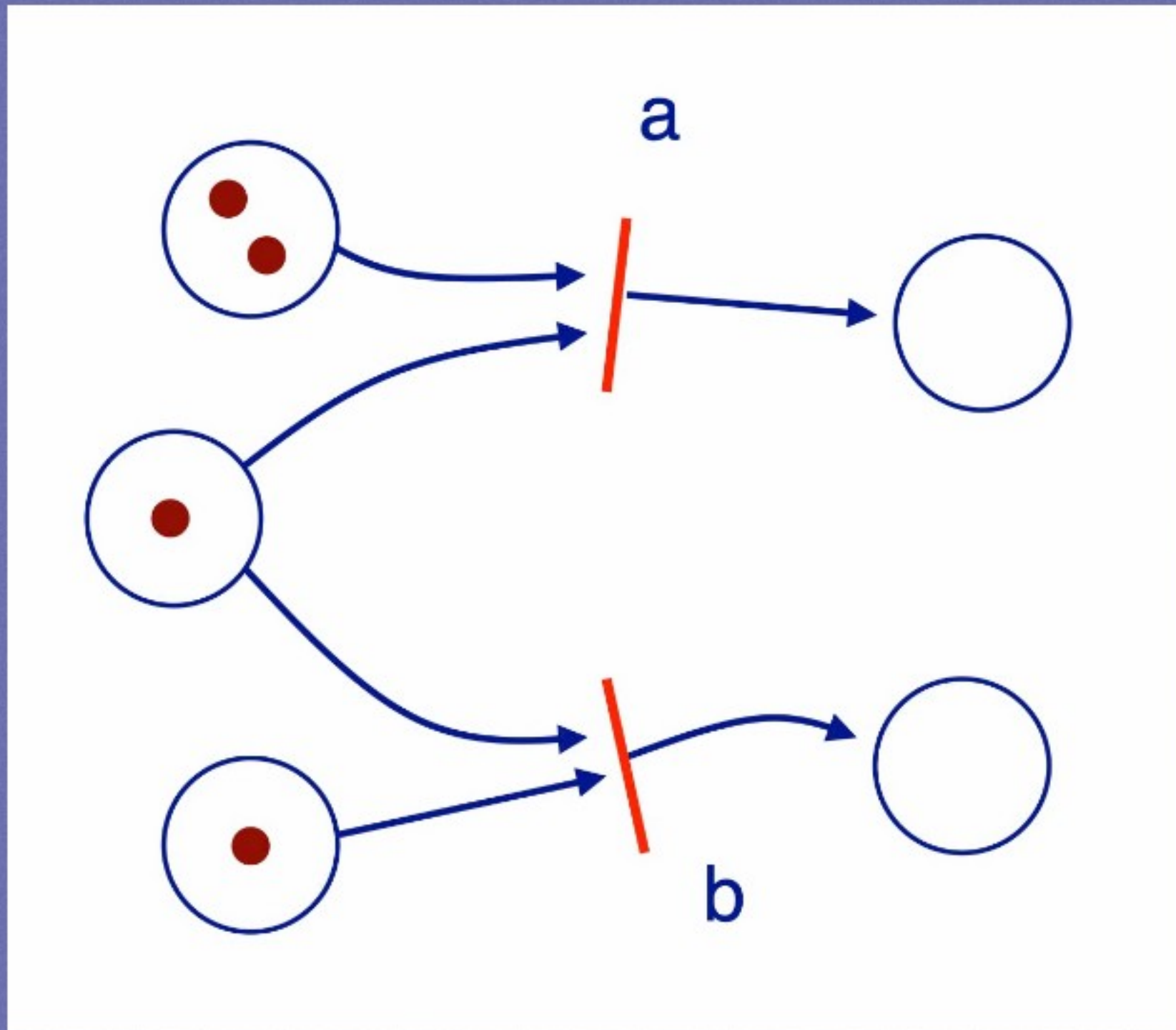
Is this Petri net live / deadlocked / finite?



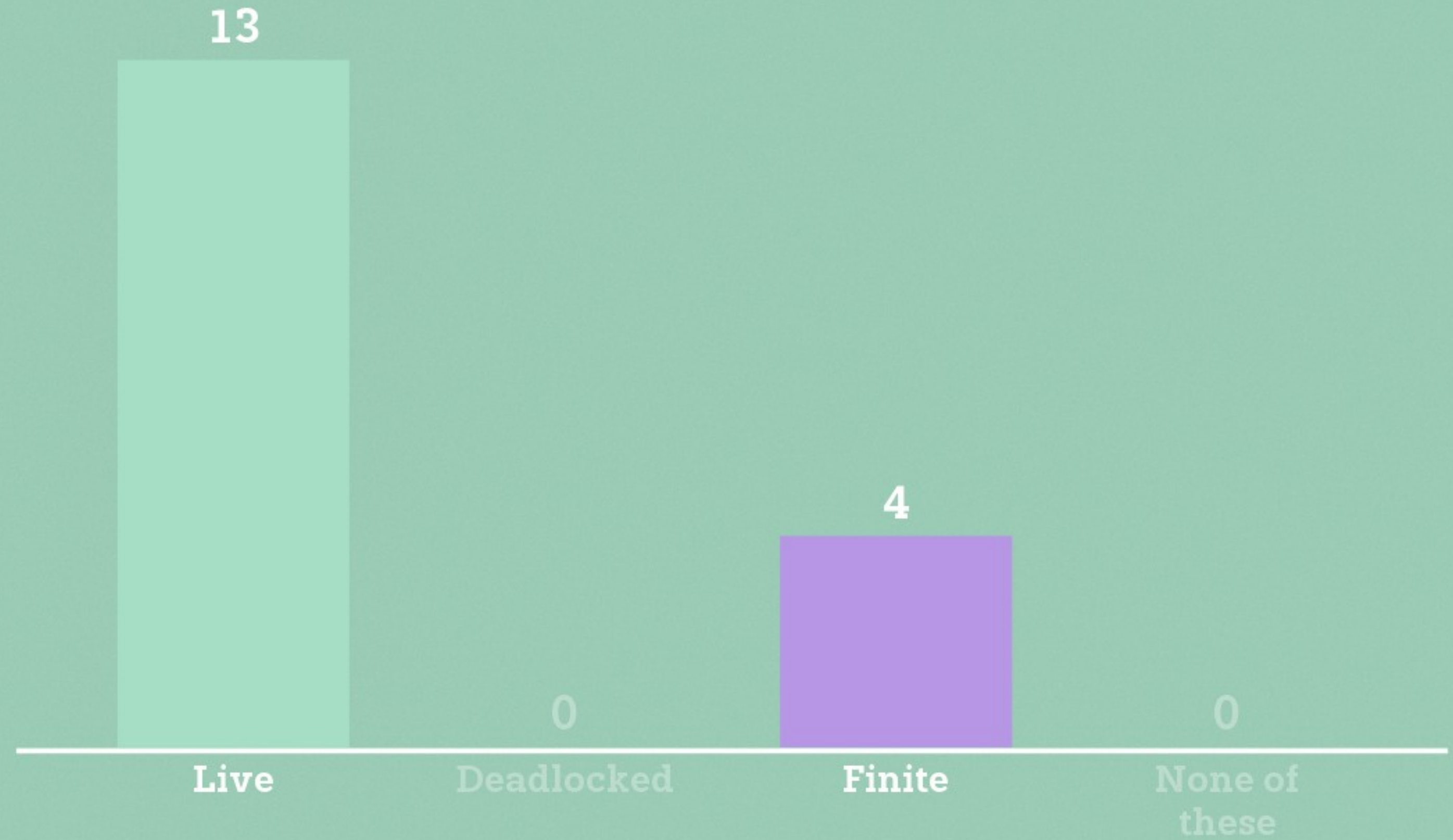
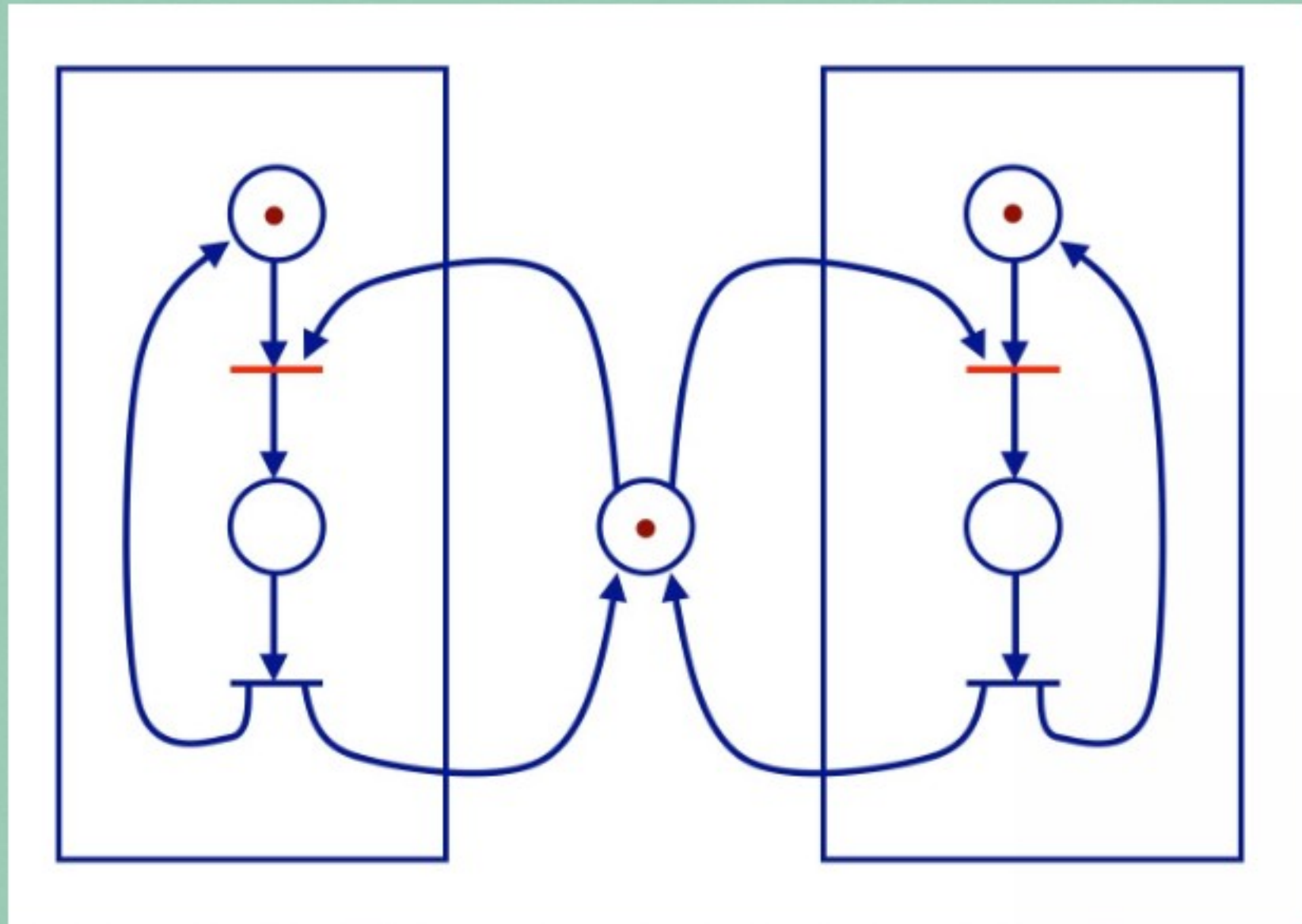
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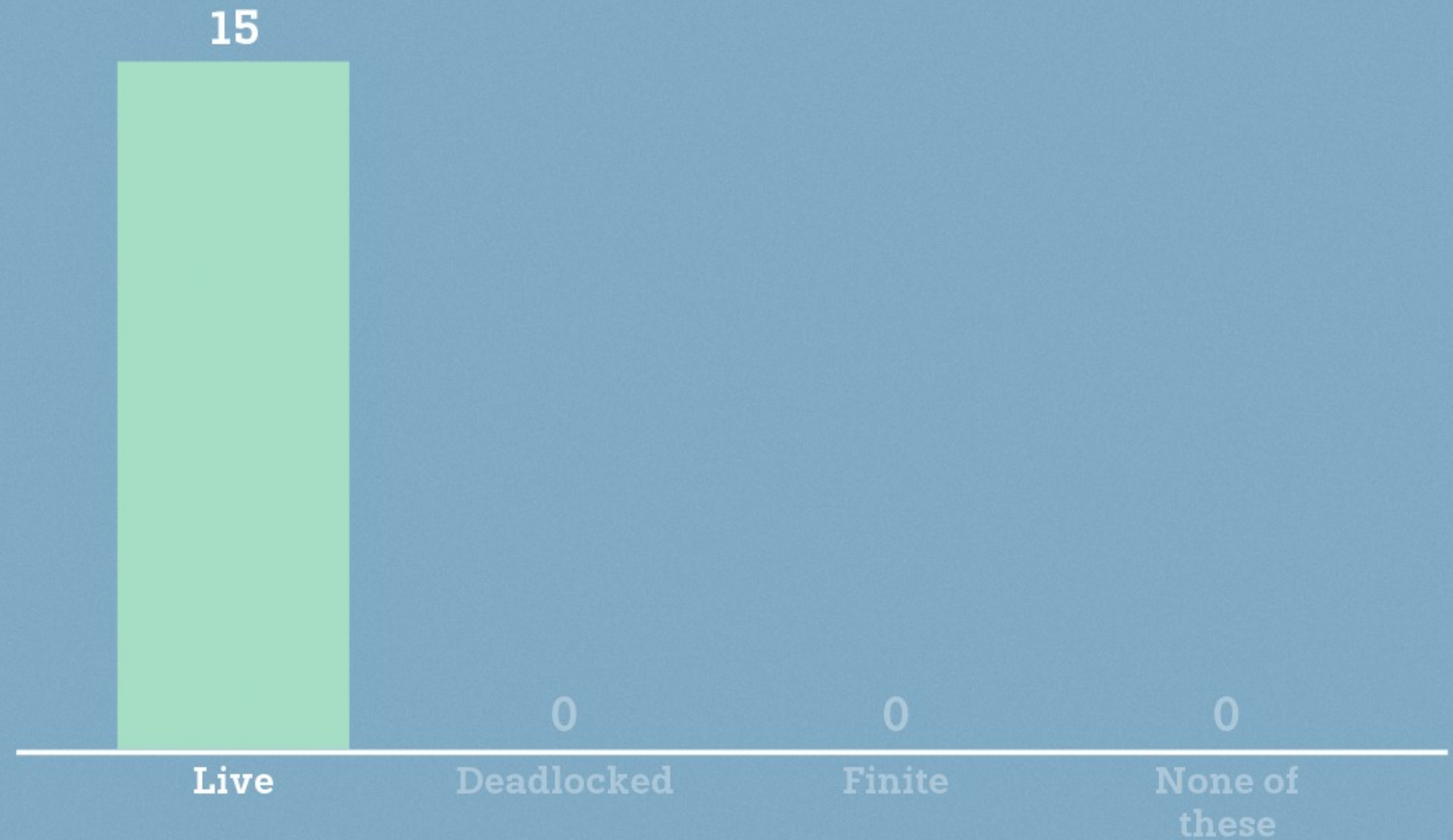
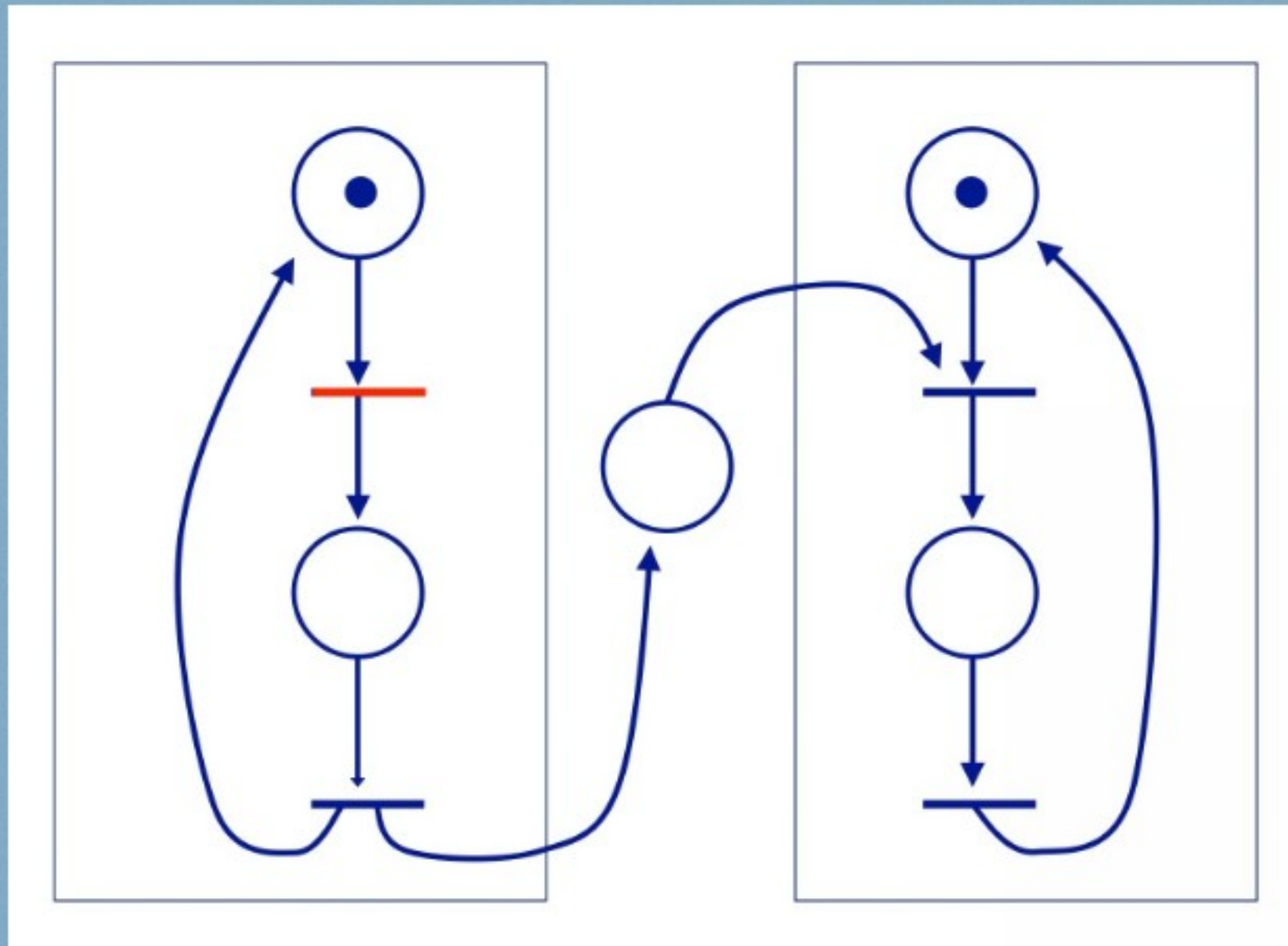
Is this Petri net live / deadlocked / finite?



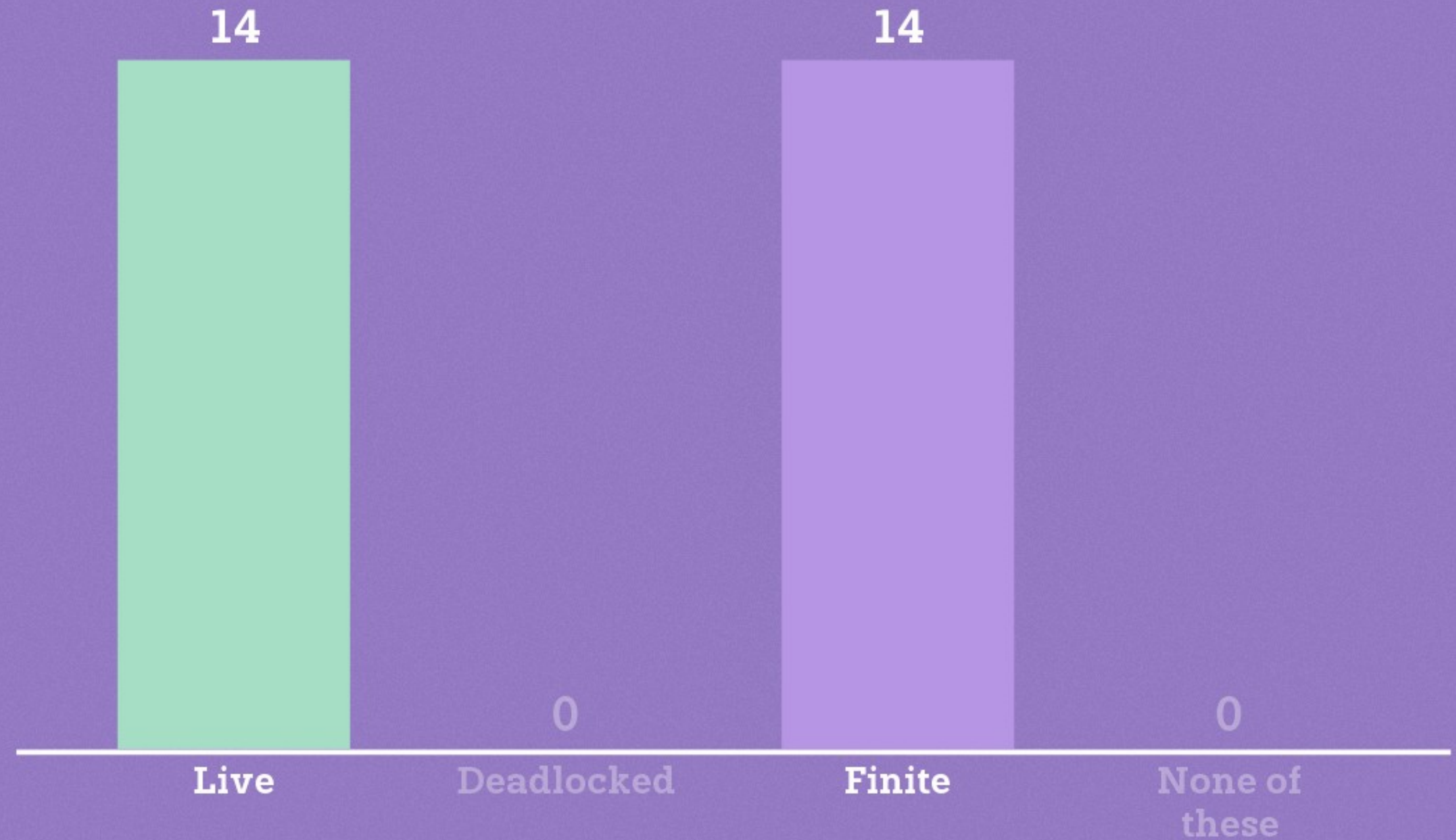
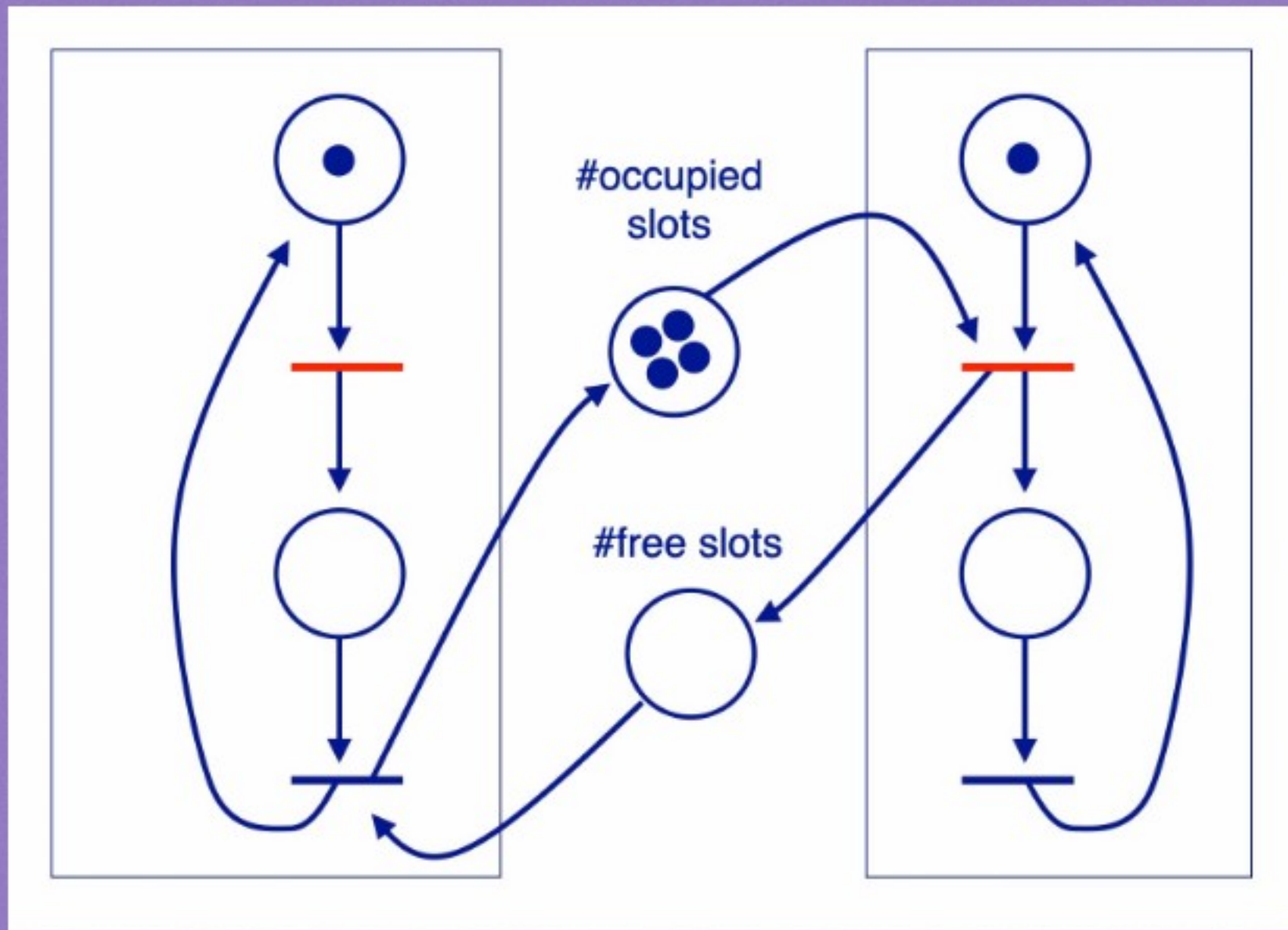
Is this Petri net live / deadlocked / finite?



Is this Petri net live / deadlocked / finite?



Is this Petri net live / deadlocked / finite?



Which kinds of Petri nets can be modeled by FSPs?

Finite nets

Conservative Petri nets

k bounded and safe nets

One-token conservative nets

Bounded petri nets. Unbounded would require infinite states i think, or büchi automata for some unbounded nets.

K-Bounded Petri Nets

All but the unbounded ones

All of them

all of them

Which kinds of Petri nets can be modeled by FSPs?

All

All

All of them.

Which kinds of FSPs can be modeled by Petri nets?

All

All

all

all

All of them.

just split arrows into transitions

Last chance for questions