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Question Suppose we're using a buffer pool that can store up to 5 records, and that the following sequence of record accesses take place:

10 50 20 10 20 10 30 50 10 20 40 70 10 50 10 30

The buffer pool uses the LRU replacement policy. Which records will now be in the buffer pool?

The pool will contain the five different records that were accessed most recently, so that would be:

40 70 50 10 30

Here's a step-by-step trace of the pool contents; the MRU record is at the top of the stack:

10	50	20	10	20	10	30	50	10	20	40	70	10	50	10	30
	10	50	20	10	20	10	30	50	10	20	40	70	10	50	10
		10	50	50	50	20	10	30	50	10	20	40	70	70	50
						50	20	20	30	50	10	20	40	40	70
										30	50	50	20	20	20

The fact that LRU can be modeled with a stack proves that increasing the number of pool slots can never result in an increased number of misses (unlike FIFO).