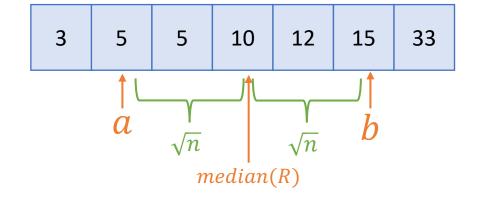
A	.1111
Array S of	
	numbers:

9)	5	34	1	2	33	12	4	15	3	6	8	10	18	0

n = 15 here.

Choose a set R of size $n^{3/4}$ by drawing that many things uniformly at random, independently.

Sort *R*:



Find all the things in S between a and b (time O(n)), to form a list T:

10

Return

8

• The median is the 8'th smallest thing in S, which is the 8-5=3'rd smallest thing in T.

• We can see in time O(n) that

there are 5 things in *S* less

than a, and 3 things in S

larger than b.

If this calculation shows that the median is not in T, output FAIL.

If $|T| < 4n^{3/4}$, sort T: (otherwise output FAIL)

