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HW 4

(12) $(x, y, z) \rightarrow (y, z, x)$

(x, y, z)

4 minimum statements needed

(18) When the smallest (in searched area) is found, the location and value is saved, until the next smallest occurs and it simply does nothing if they are equal

(7) A linear search would find it faster.

(13) $3(n^2) + n + 1$ a.d. $n+1 = \frac{n(n+1)}{1} + n$

$3(n^2) + 2n + 1$

$\frac{n(n+1)+n}{1} = \frac{n^2+n}{1}$

$n^2 + 2n + 1$

~~(5)~~ (5)

$\pm$ (5)

(21) a) 1.224×10^{-6}

b) 1.05×10^{-7}

c) 1.13×10^{6}

d) 727×10^{21}

(22) a) Worst case performance = $O(n)$

b) $x = a_i$, $O(1)$

c) Binary search

$x^2 + \ln x$

$x^4 = x^3 - x^1$

$\log(x)$ is negligible.