Connor Dailey

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1st	2	5	5	7	9	15	20	20	27	32	37	38	40	43	51	53	64	64	71	77	77	77	80	84	86	91	95

target: 80 first: 0 last: 26 oneThird = (0 + (26-0)/3) = 8
twoThirds = (0 + 2 • (26-0)/3) = 17 target == arr[oneThird] 80 ≠ 27
target == arr[twoThirds] 80 ≠ 64 target < arr[oneThird]: 80 < 27 false
target > arr[twoThirds] 80 > 64 true ternarySearch(arr, 2/3+1, last, tar

	18	19	20	21	22	23	24	25	26
2nd	71	77	77	77	80	84	86	91	95

first = 18 last = 26 target = 80 oneThird = (18 + (26-18)/3) = 20
twoThirds = (18 + 2 • (26-18)/3) = 23 target == arr[oneThird] 77 ≠ 8
target == arr[twoThird] = 80 ≠ 84 target < arr[oneThird] 80 <
target > arr[twoThirds] 80 > 84 else return ternarySearch(arr, 1/3
2/3-1, target)

	21	22
3rd	77	80

first = 21 last = 22 target = 80 oneThird (21 + (22-21)/3) = 21
twoThird = (21 + 2 • (22-21)/3) = 21 target == arr[oneThird] = 77 ≠
target == arr[twoThirds] 80 ≠ 77 target < arr[oneThird] 80 < 77
target > arr[twoThird] 80 > 77 true ternarySearch(arr, 2/3+1, last, targ

	22
4th	80

first = 22 last = 22 target = 80 oneThird (22 + (22-22)/3) = 22
twoThird = (22 + 2 • (22-22)/3) = 22 target == arr[oneThird] = 8
returns oneThird = 22 Tru
(22)

Connor Dailey

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1st	2	5	5	7	9	15	20	26	27	32	37	38	40	43	51	53	64	64	71	77	77	77	80	84	86	91	95

target: 80 first: 0 last: 26 oneThird = (0 + (26-0)/3) = 8
twoThirds = (0 + 2 • (26-0)/3) = 17 target == arr[oneThird] 80 ≠ 27
target == arr[twoThirds] 80 ≠ 64 target < arr[oneThird] 80 < 27 false
target > arr[twoThirds] 80 > 64 true ternarySearch(arr, 2/3+1, last, tar

18	19	20	21	22	23	24	25	26
2nd	71	77	77	77	80	84	86	91	95

first = 18 last = 26 target = 80 oneThird = (18 + (26-18)/3) = 20
twoThirds = (18 + 2 • (26-18)/3) = 23 target == arr[oneThird] 77 ≠ 80
target == arr[twoThird] = 80 ≠ 84 target < arr[oneThird] 80 <
target > arr[twoThirds] 80 > 84 else return ternarySearch(arr, 1/3
2/3+1, target)

21	22
3rd	77	80

first = 21 last = 22 target = 80 oneThird (21 + (22-21)/3) = 21
twoThird = (21 + 2 • (22-21)/3) = 21 target == arr[oneThird] = 77 ≠
target == arr[twoThirds] 80 ≠ 77 target < arr[oneThird] 80 < 77
target > arr[twoThird] 80 > 77 true ternarySearch(arr, 2/3+1, last, targ

22
4th	80

first = 22 last = 22 target = 80 oneThird (22 + (22-22)/3) = 22
twoThird = (22 + 2 • (22-22)/3) = 22 target == arr[oneThird] = 80
returns oneThird = 22
tru