

5.)

Params: arrayOfInts S, int val

- 1.) Sort array S
- 2.) Create variables x and y to hold first and last elements of array respectively
- 3.) Add x and y
- 4.) Compare sum of x and y to val
 - a.) if match return true and exit
 - b.) if sum > val
 - a. Decrease y and repeat
 - c.) if sum < val
 - b. increase x and repeat
- 5.) Continue process until x => y

Algorithm in action on array S = {12,3,4,15,11,7} and val=20

- 1.) S={3,4,7,11,12,15}
- 2.) x=3 y=15
- 3.) 18
- 4.) Compare
 - a. 18 = 20 ✗
 - b. 18 > 20 ✗
 - c. 18 < 20 ✓
- 5.) x=4 y=15
- 6.) 19
- 7.) Compare
 - a. 19 = 20 ✗
 - b. 19 > 20 ✗
 - c. 19 < 20 ✓
- 8.) x=7 y=15
- 9.) 22
- 10.) Compare
 - a. 22 = 20 ✗
 - b. 22 > 20 ✓
- 11.) x=7 y=12
- 12.) 19
- 13.) for simplicity we know this doesn't work already from line 6
- 14.) 11 and 12 would be up next...then 12 and 12 but because x is greater than or equal to y, the program would end.