# The Algorithm

Max-Profit-Helper(start\_date, end\_date, dates)

if there is only one date:

return (start\_date, start\_date)

else:

middle\_date = (start\_date + end\_date) / 2

(left\_buy\_date, left\_sell\_date) = Max-Profit(0, middle\_date)

(right\_buy\_date, right\_sell\_date) = Max-Profit(middle\_date + 1, end\_date)

left\_lowest = date with lowest price from the left subarray

right\_highest = date with highest price from the right subarray

left\_half\_answer = (left\_buy\_date, left\_sell\_date)

right\_half\_answer = (right\_buy\_date, right\_sell\_date)

across\_answer = (left\_lowest, right\_highest)

return pair\_of\_maximum\_profit(left\_half\_answer, right\_half\_answer, across\_answer)