

Name Prof. M

Mathematics 2602

Quiz 3

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1. Recall the bubble sort algorithm:

```

procedure bubblesort( $a_1, \dots, a_n$  : real numbers with  $n \geq 2$ )
for  $i := 1$  to  $n - 1$ 
    for  $j := 1$  to  $n - i$ 
        if  $a_j > a_{j+1}$  then interchange  $a_j$  and  $a_{j+1}$ 
return ( $a_1, \dots, a_n$ )
  
```

Apply this algorithm to the sequence (3, 1, 7, 5, 4). Use a new column for each interchange. You do not need to use all of the columns.

3	1	1	1	1			
1	3	3	3	3			
7	7	5	5	4			
5	5	7	4	5			
4	4	4	7	7			