1. Introduction

Unit 2, big theta notation. Concept to talk about the running time of algorithms.

1. Quiz: Divisible By Five

Tools for analyzing growth rates. Graph networks!

numbers = [361, 636, 277, 129, 434, 577, 796, 596, 727, 566, 156, 109, 714, 716, 546, 979, 366, 766, 137, 243, 331, 999,

922, 304, 657, 314, 634, 303, 677, 597, 363, 174, 431, 193, 361, 677, 403, 926, 279, 692, 749, 401, 346, 202,

763, 314, 333, 244, 796, 697, 674, 651, 517, 349, 337, 667, 617, 464, 379, 793, 542, 464, 962, 146, 946, 199,

302, 699, 606, 126, 519, 203, 137, 517, 146, 724, 696, 699, 747, 663, 126, 247, 469, 953, 396, 502, 562, 647,

364, 214, 346, 646, 331, 426, 763, 291, 557, 764, 939, 656, 753, 561, 797, 224, 537, 361, 263, 493, 196, 162,

362, 102, 629, 936, 663, 279, 966, 241, 907, 677, 945, 416, 122, 563, 667, 394, 654, 592, 977, 177, 666, 199,

463, 561, 954, 924, 991, 363, 754, 754, 199, 451, 796, 566, 629, 651, 517, 167, 704, 749, 622, 299, 466, 559,

973, 243, 639, 276, 603, 753]

reduced\_numbers = list()

for number in numbers:

reduced\_numbers.append(number % 10)

reduced\_product = reduced\_numbers[0]

for x in range(1, len(reduced\_numbers)):

product = reduced\_product \* reduced\_numbers[x]

reduced\_product = product % 10

if reduced\_product % 5 == 0:

print('YES, this product is divisible by 5.')

else:

print('NO, the product is not divisible by 5.')

# YES, this product is divisible by 5.

# trick = one value has to be divisible by 5

1. Quiz: Chain Network

m = n – 1 , m edges with n nodes if it is a chain network

1. Ring Network
2. Quiz: Grid Network
3. Big-Theta
4. Quiz: Big-Theta Reflexive
5. Big-Theta Examples
6. Other sets of Functions
7. Quiz: Big-Theta Practice
8. Planar Graphs
9. Nodes, Edges, Regions
10. Quiz: Regions In A Planar Graph
11. Eulers Formula
12. Growth Rates
13. Quiz: Complete Graph
14. Hypercube
15. Quiz: Hypercube Edges
16. Quiz: Tree Graphs
17. Randomly Generated Graphs
18. Quiz: Recursive Graphs
19. Quiz: Recurrence Relation
20. Number Of Edges
21. N Squared
22. Quiz: Tangled Hypercube
23. Recap