

CS50 for MBAs

- Sit wherever you'd like, but always bring name cards!
- Auditors welcome (if seats permit)!
- Laptops okay for note-taking and looking up terms, but step outside to field emails or do other work!
- Website at **cs50.github.io/hbs**!

CS50 for MBAs

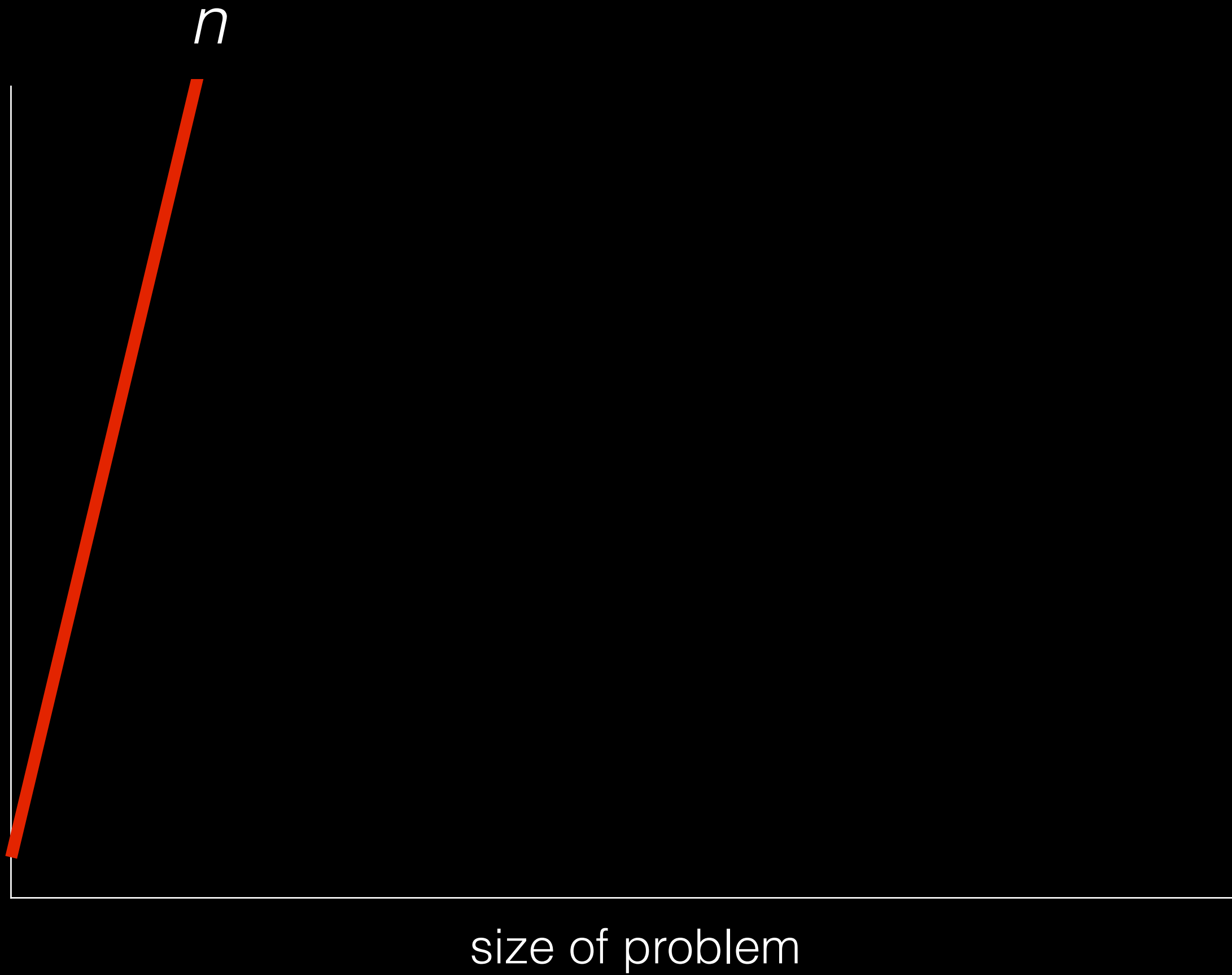
Computational Thinking

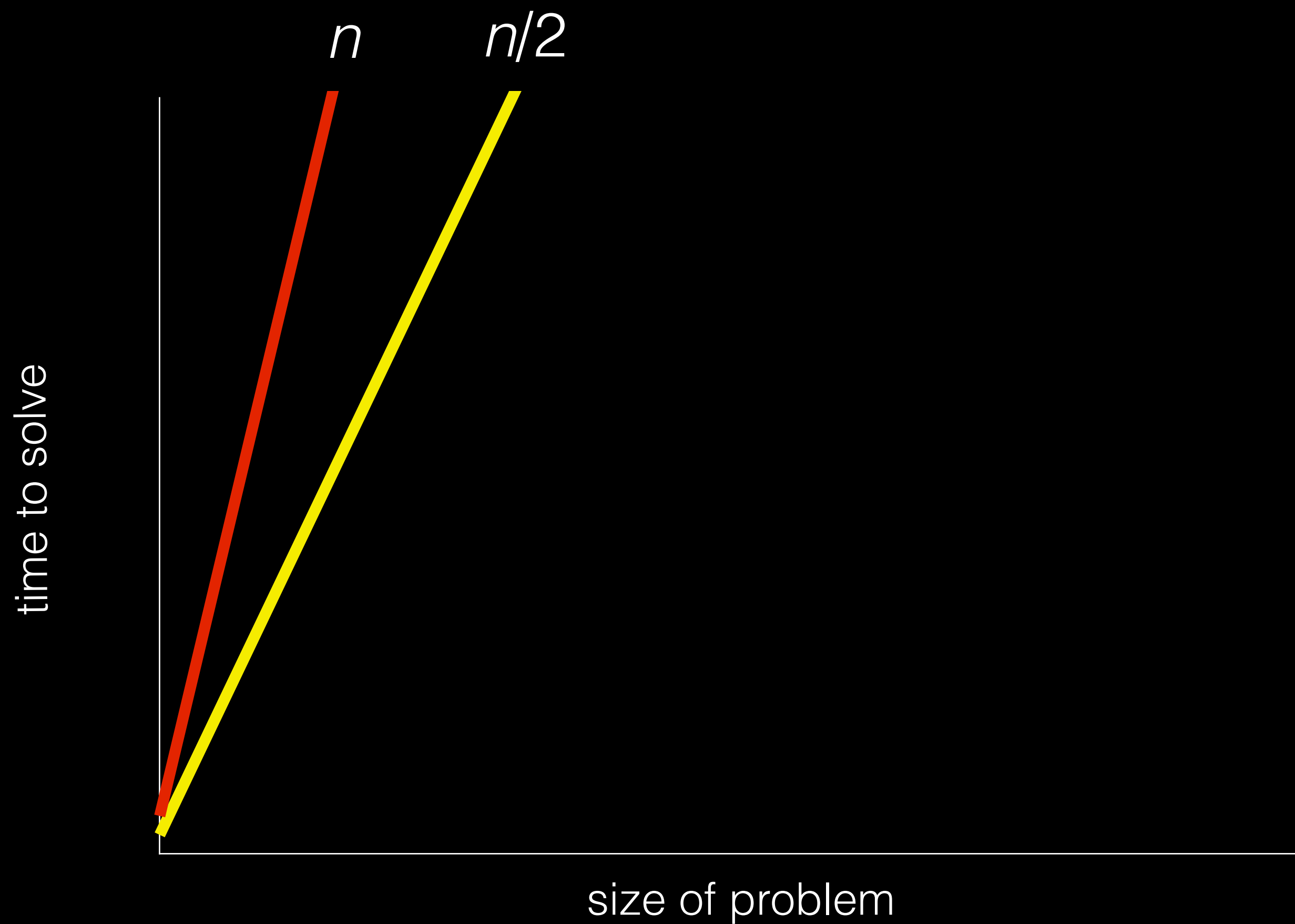
- 0 Stand up and think of the number 1.
- 1 Pair off with someone standing.
Add your numbers together.
- 2 One of you should then sit down.
If you're still standing, go back to step 1.

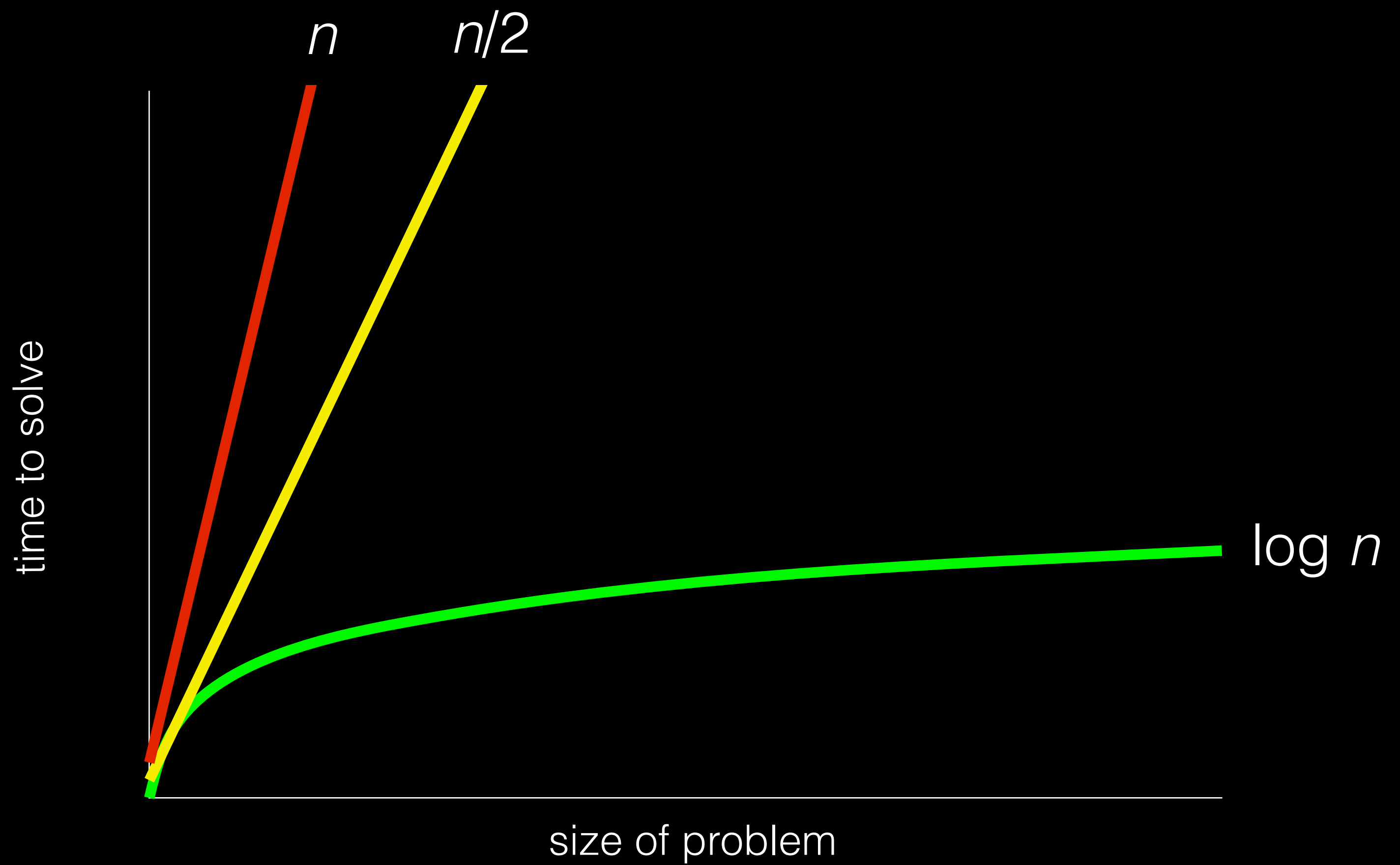
time to solve

size of problem

time to solve







CS50 for MBAs

cs50.github.io/hbs

Classes

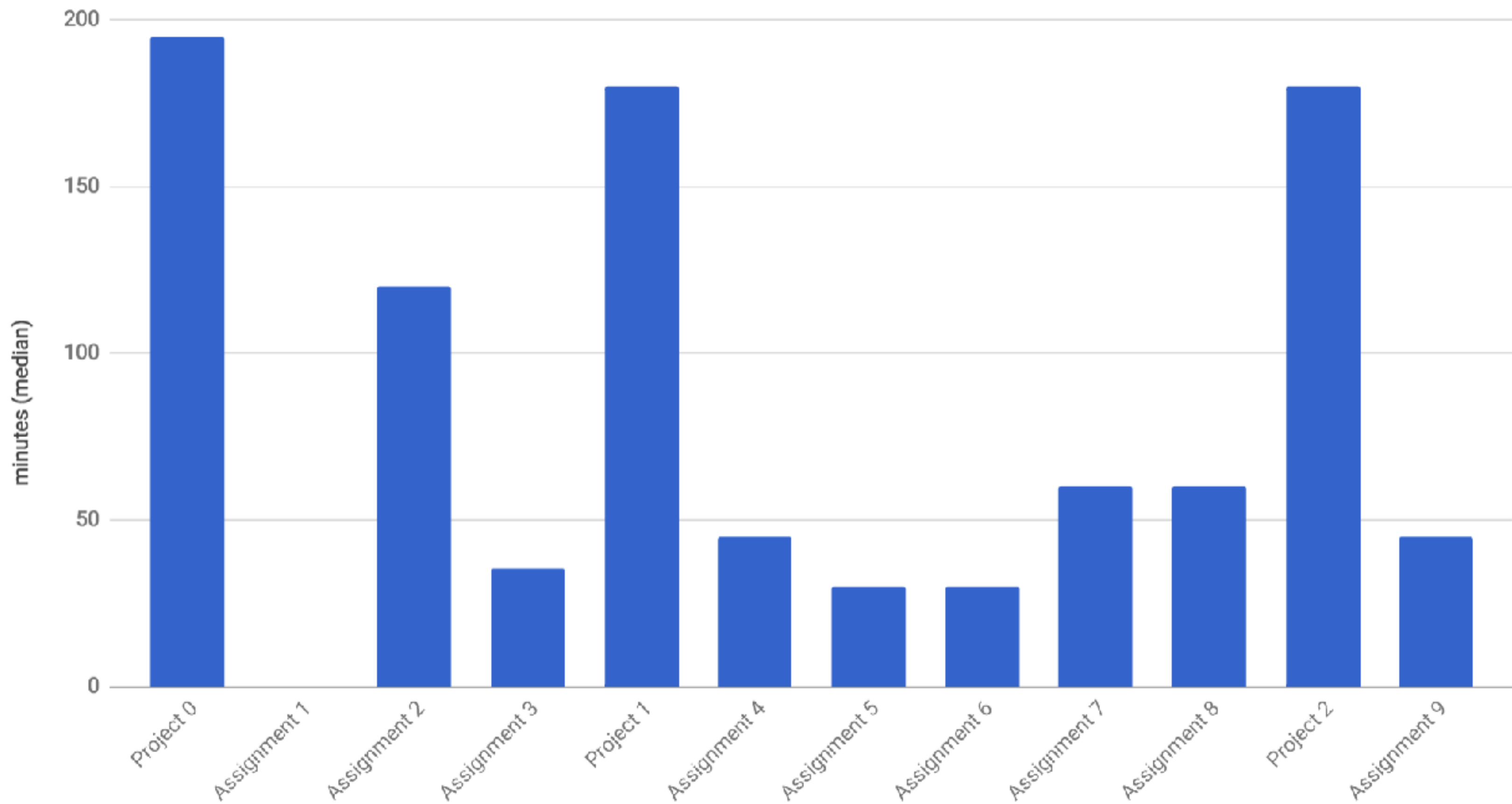
- Computational Thinking
- Programming Languages
- Algorithms, Data Structures
- Internet Technologies
- Web Design
- Cloud Computing
- Database Design
- Privacy, Security
- Web Programming
- Mobile Strategies
- Technology Stacks
- Web-Scale Data Management

Seminars

- Programming with Python
- Recruiting Software Engineers
- Web Development with HTML and CSS
- Web Servers
- iOS Development with Swift
- Blockchain Technology
- Web Development with JavaScript
- SQL
- Source Control with GitHub
- Algorithm Design and Development

Homework

- Assignment 0
- **Project 0**
- Assignment 1
- Assignment 2
- Assignment 3
- **Project 1**
- Assignment 4
- Assignment 5
- Assignment 6
- **Project 2**
- Assignment 7



Staff

- Alaisha Sharma
- Cheng Gong
- Colton Ogden
- **Maria Zlatkova**
- Pedro Farias
- Rodrigo Sanchez
- Vojta Drmota
- Wanqian Yang



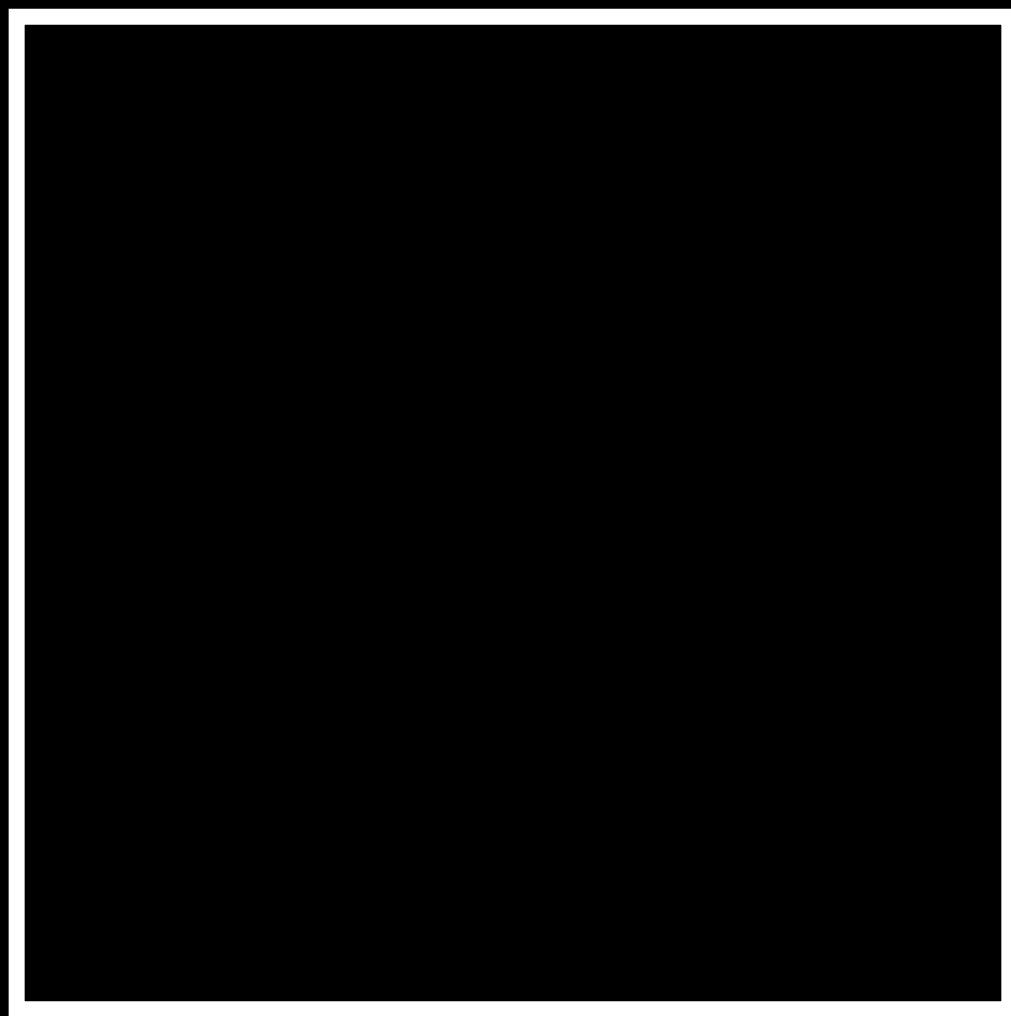
seating, name cards

laptops

Computational Thinking

- ASCII, binary
- abstraction, algorithms, pseudocode
- imprecision, overflow

inputs →



→ outputs

binary

0, 1

decimal

0, 1, 2, 3, 4, 5, 6, 7, 8, 9

ASCII

A	B	C	D	E	F	G	H	I	...
65	66	67	68	69	70	71	72	73	...

H

72

73

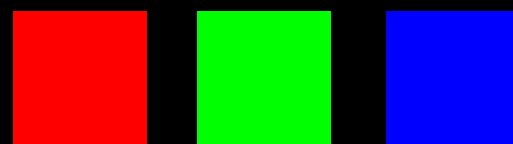
33

H I

72 73 33

H I !

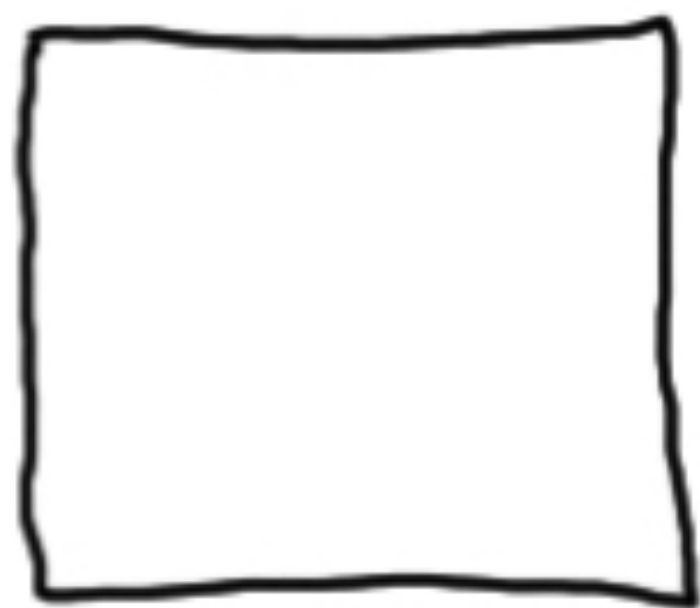
72 73 33

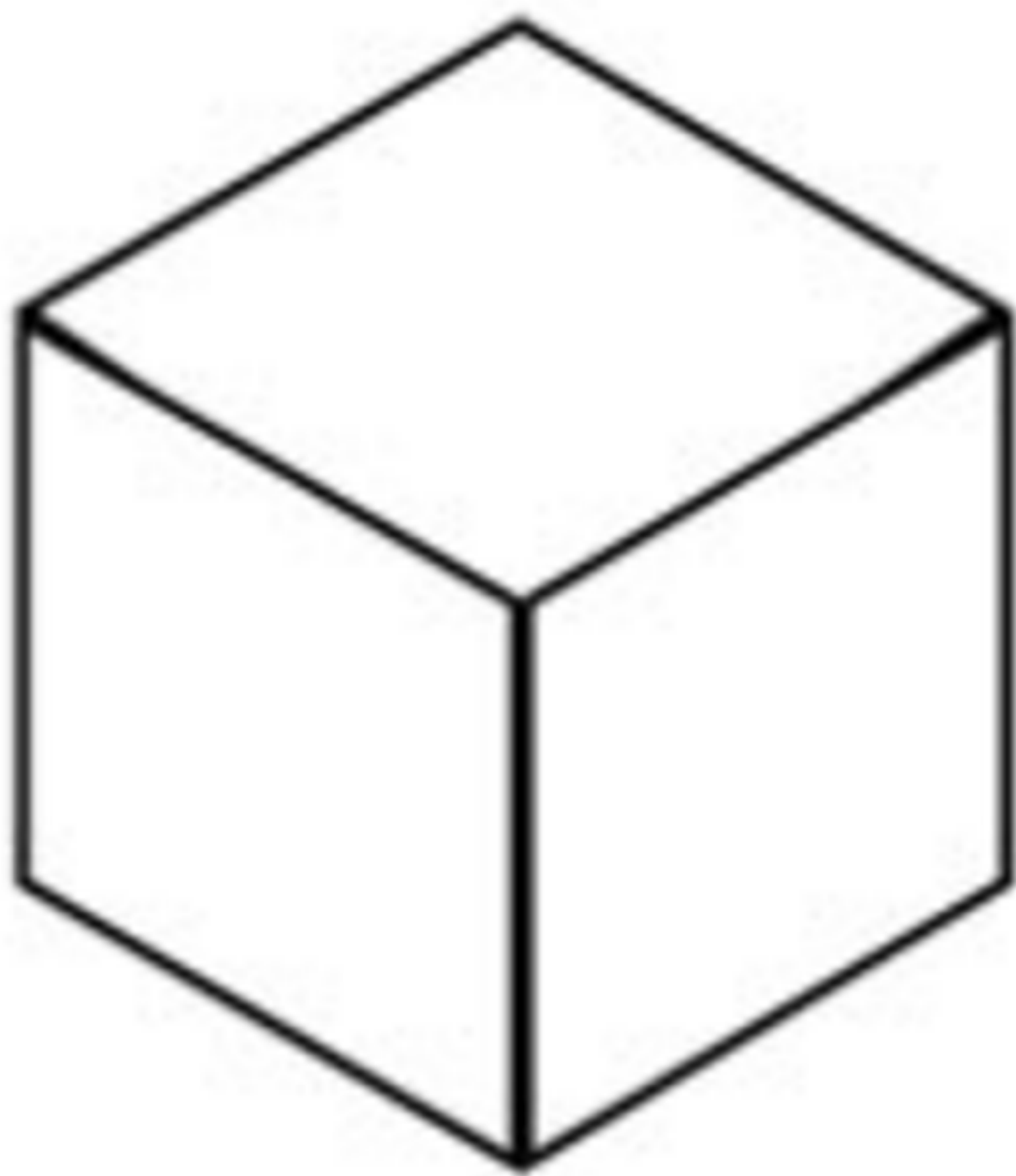


72 73 33

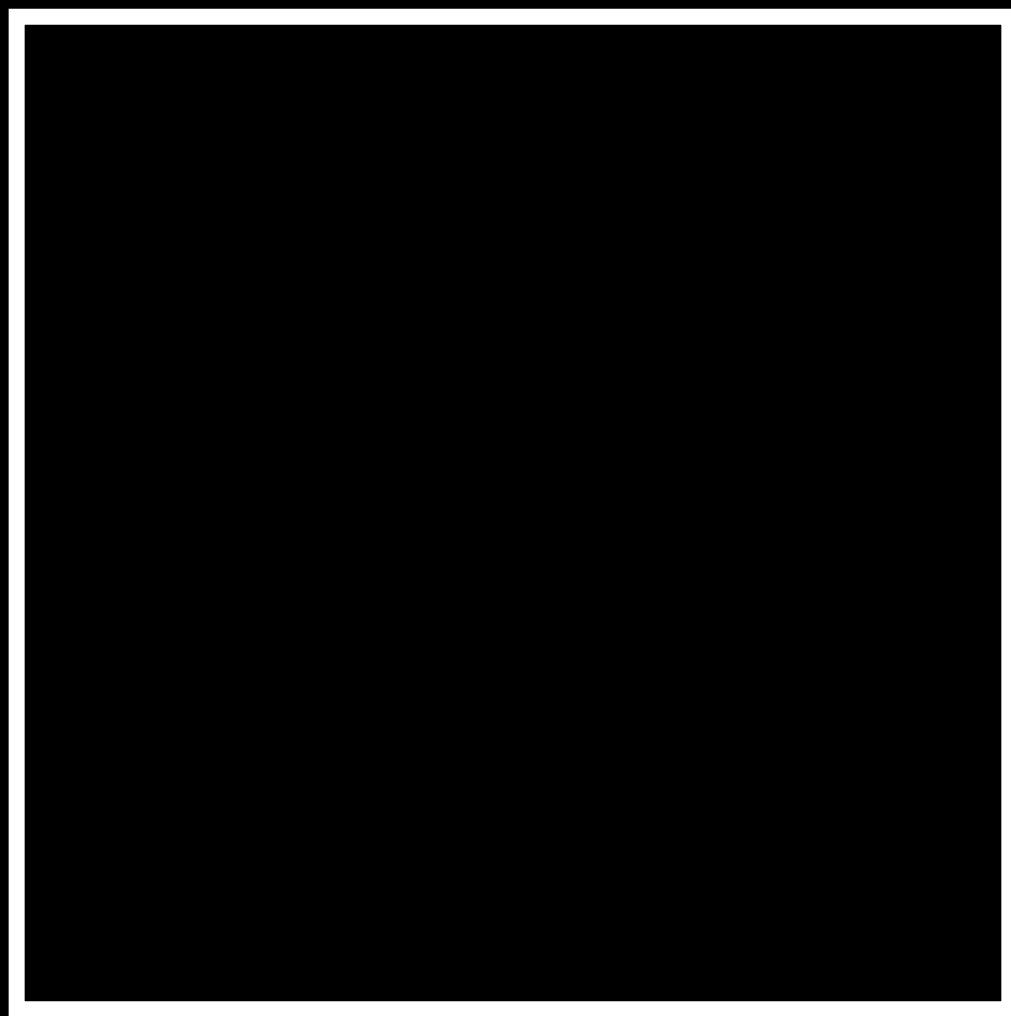


abstraction





inputs →



→ outputs

algorithms


```
0  pick up phone book
1  open to middle of phone book
2  look at names
3  if Smith is among names
4      call Mike
5  else if Smith is earlier in book
6      open to middle of left half of book
7      go back to step 2
8  else if Smith is later in book
9      open to middle of right half of book
10     go back to step 2
11 else
12     quit
```



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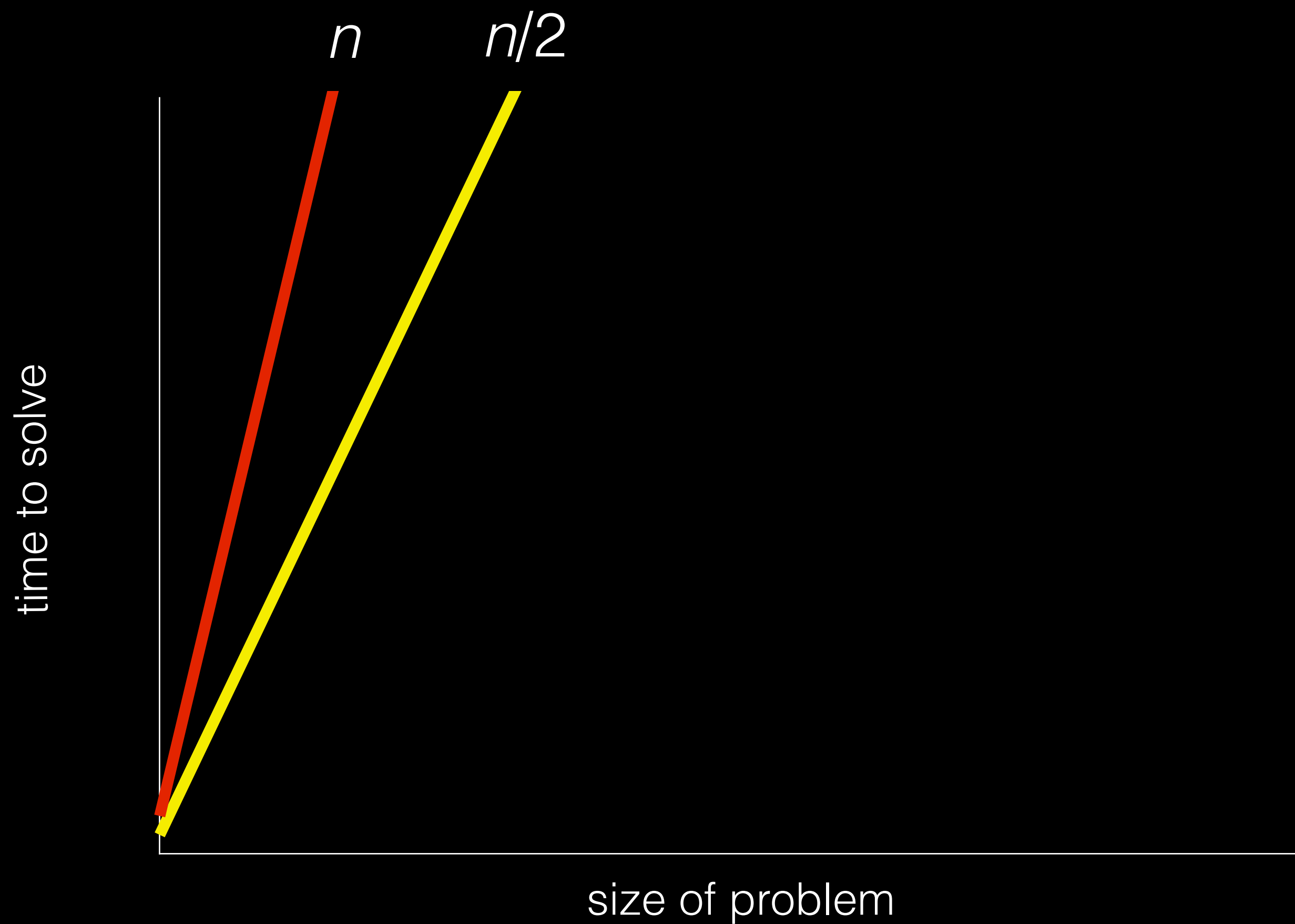
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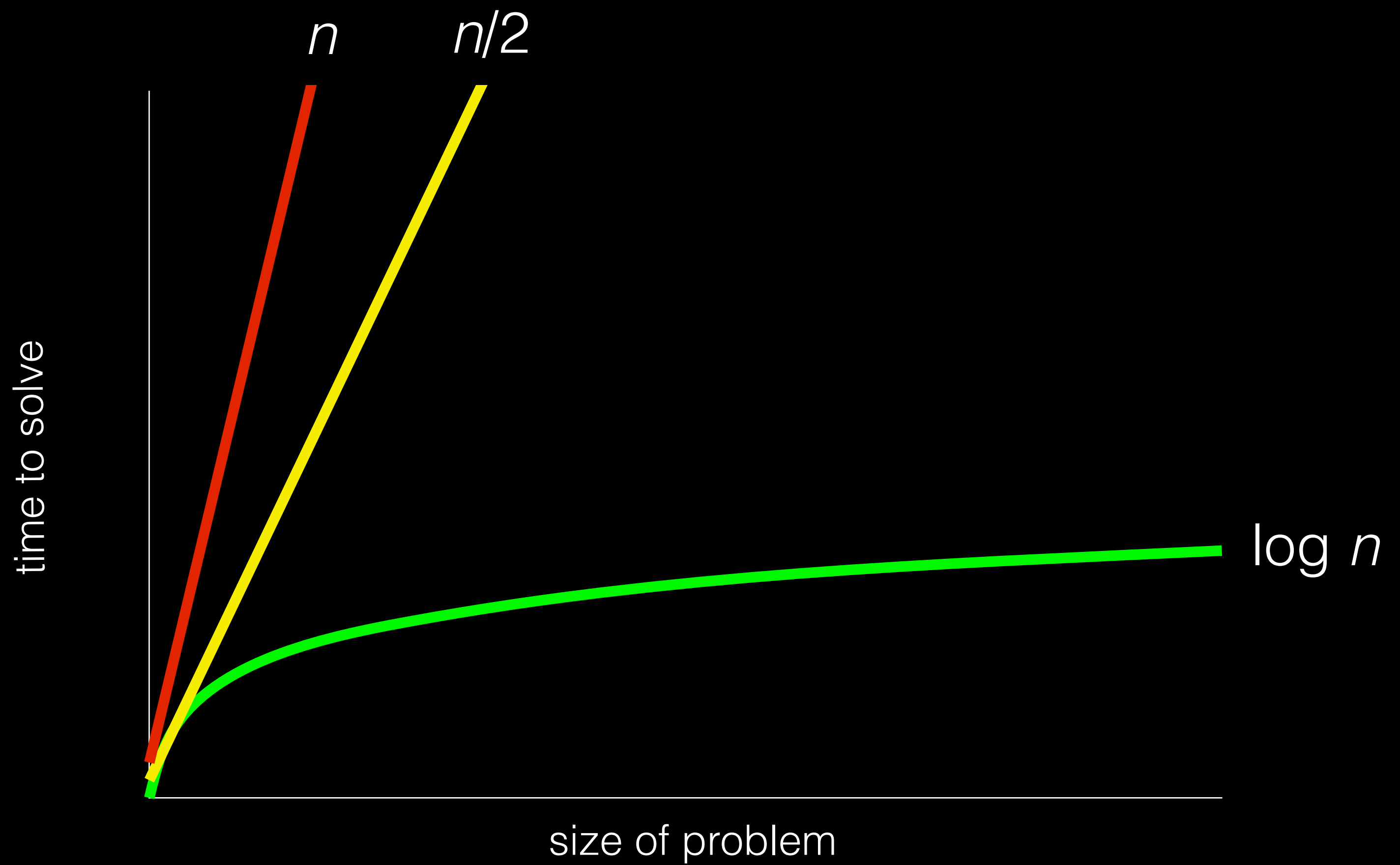
time to solve



n

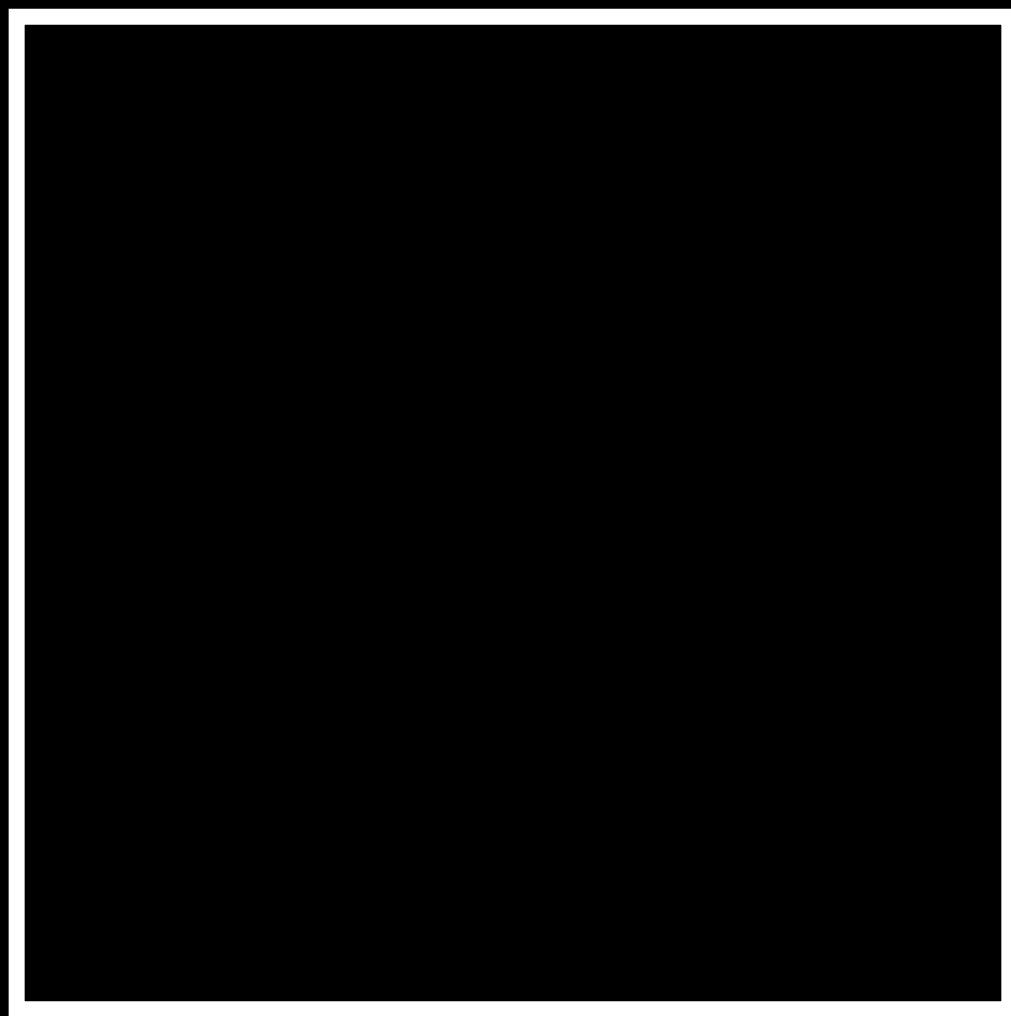
size of problem





algorithms

inputs →



→ outputs



integer overflow

128

64

32

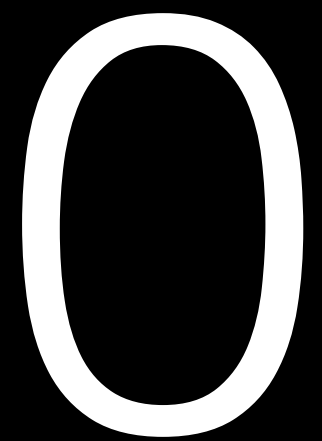
16

8

4

2

1



128

64

32

16

8

4

2

1



128

64

32

16

8

4

2

1

0

0

0

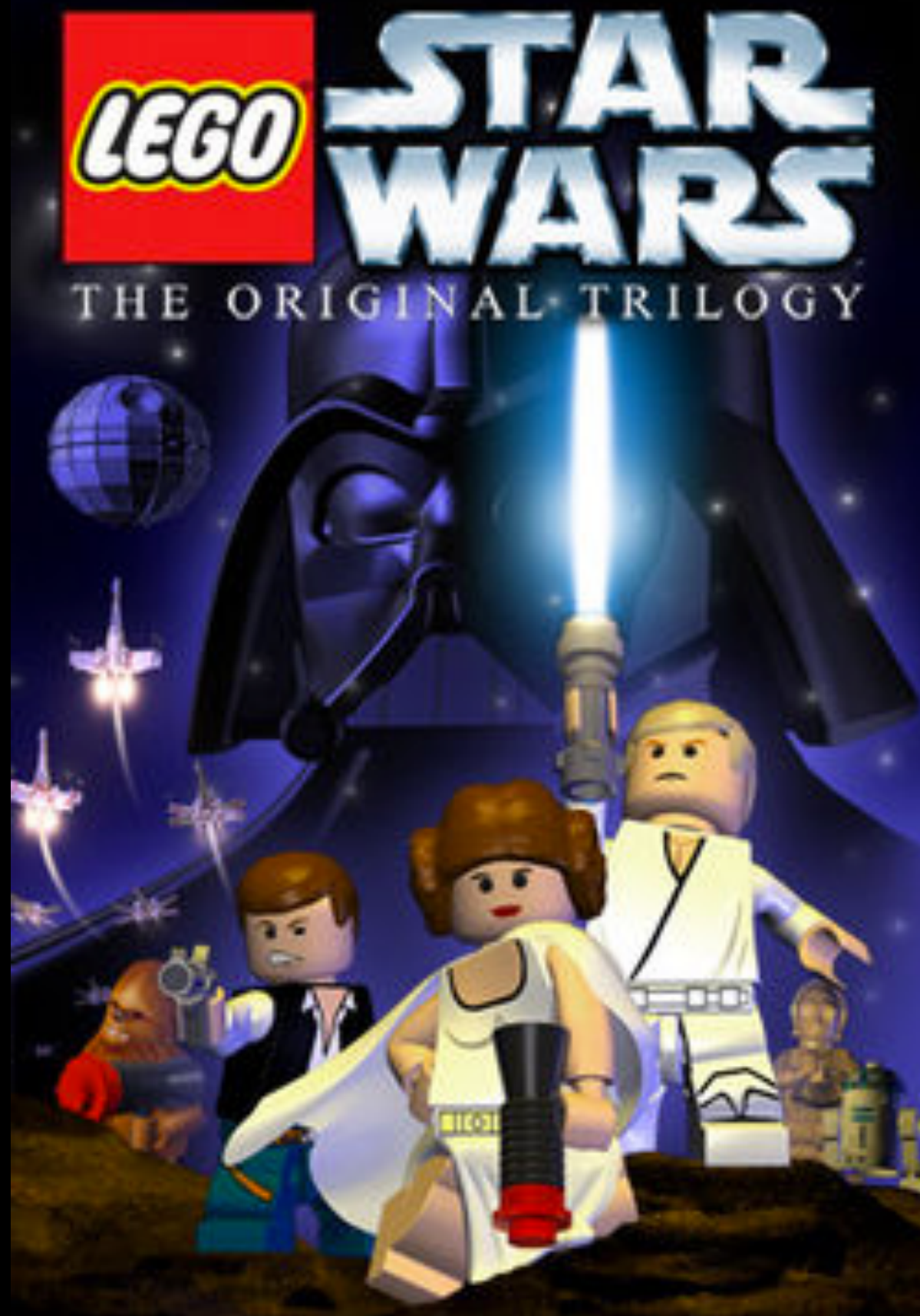
0

0

0

0

0





B **Beats**
A **Buy**

4,000,000,000





Greetings from M.Gandhi, ruler
and King of the Indians...
Our words are backed
with NUCLEAR WEAPONS!





floating-point imprecision

$\frac{1}{3}$

.33333333333333333333

Assignment 0

Next Time

Programming Languages

CS50 for MBAs

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