

This is CS50 AP.

what ultimately matters in this course is not so much
where you end up relative to your classmates but where
you, in Week 12, end up relative to yourself in Week 0

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computational thinking

inputs → algorithms → outputs

inputs → algorithms → outputs

binary

0, 1

decimal

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

100

10

1

1

2

3

100×1

+

10×2

+

1×3

100

10

1

1

2

3

100

+

20

+

3

100

10

1

1

2

3

4

0

2

0

1

0

4

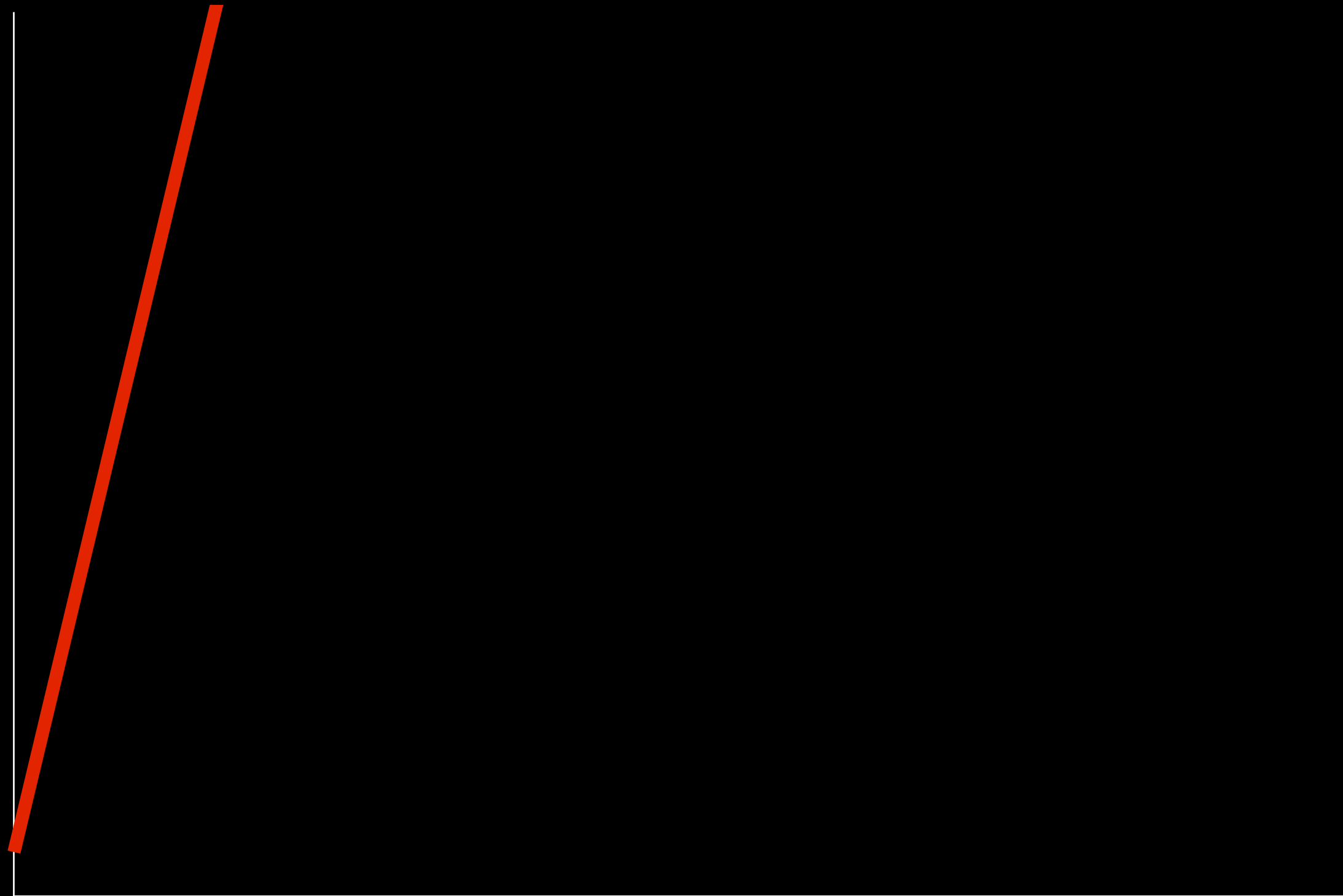
2

1

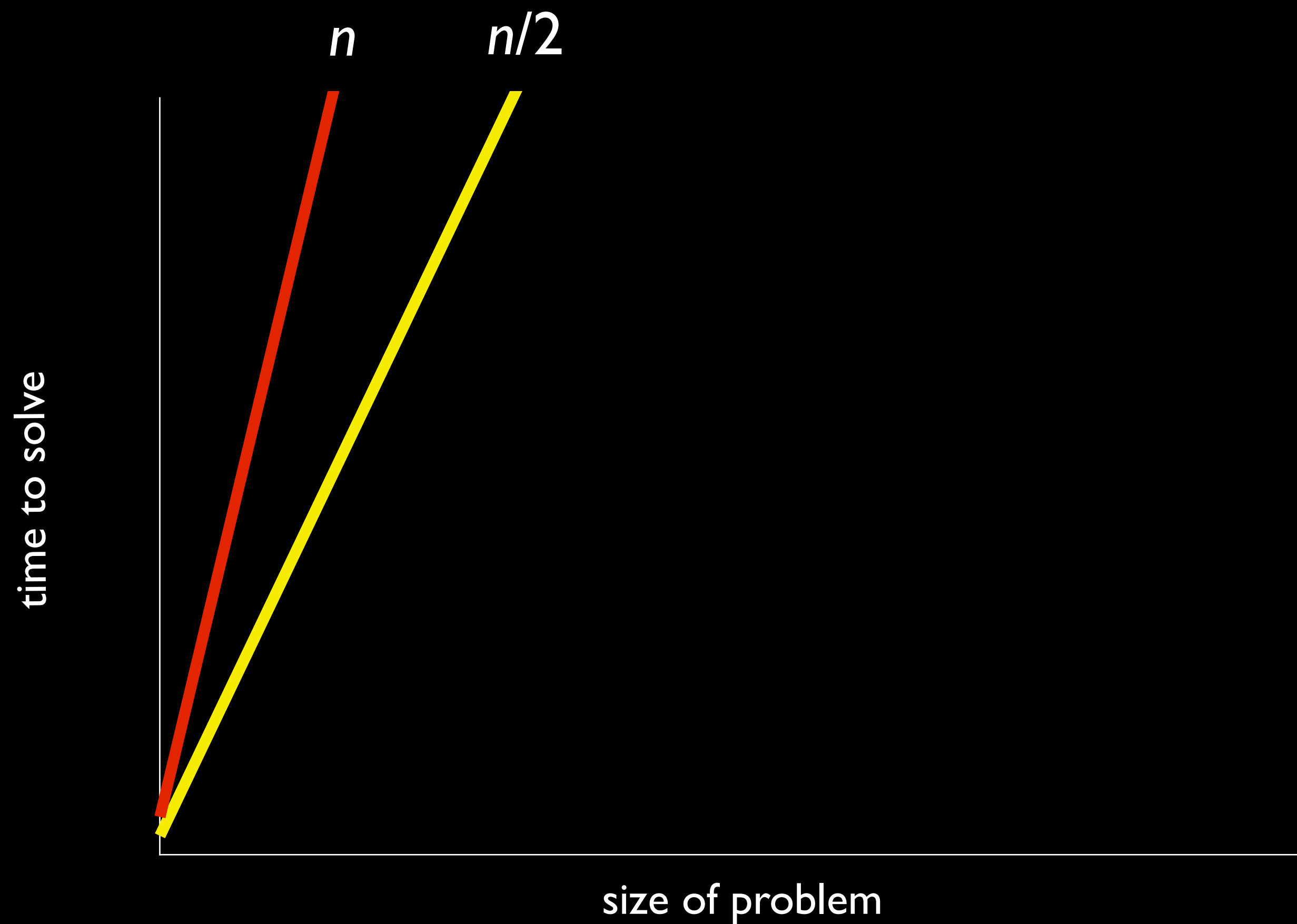
inputs → algorithms → outputs

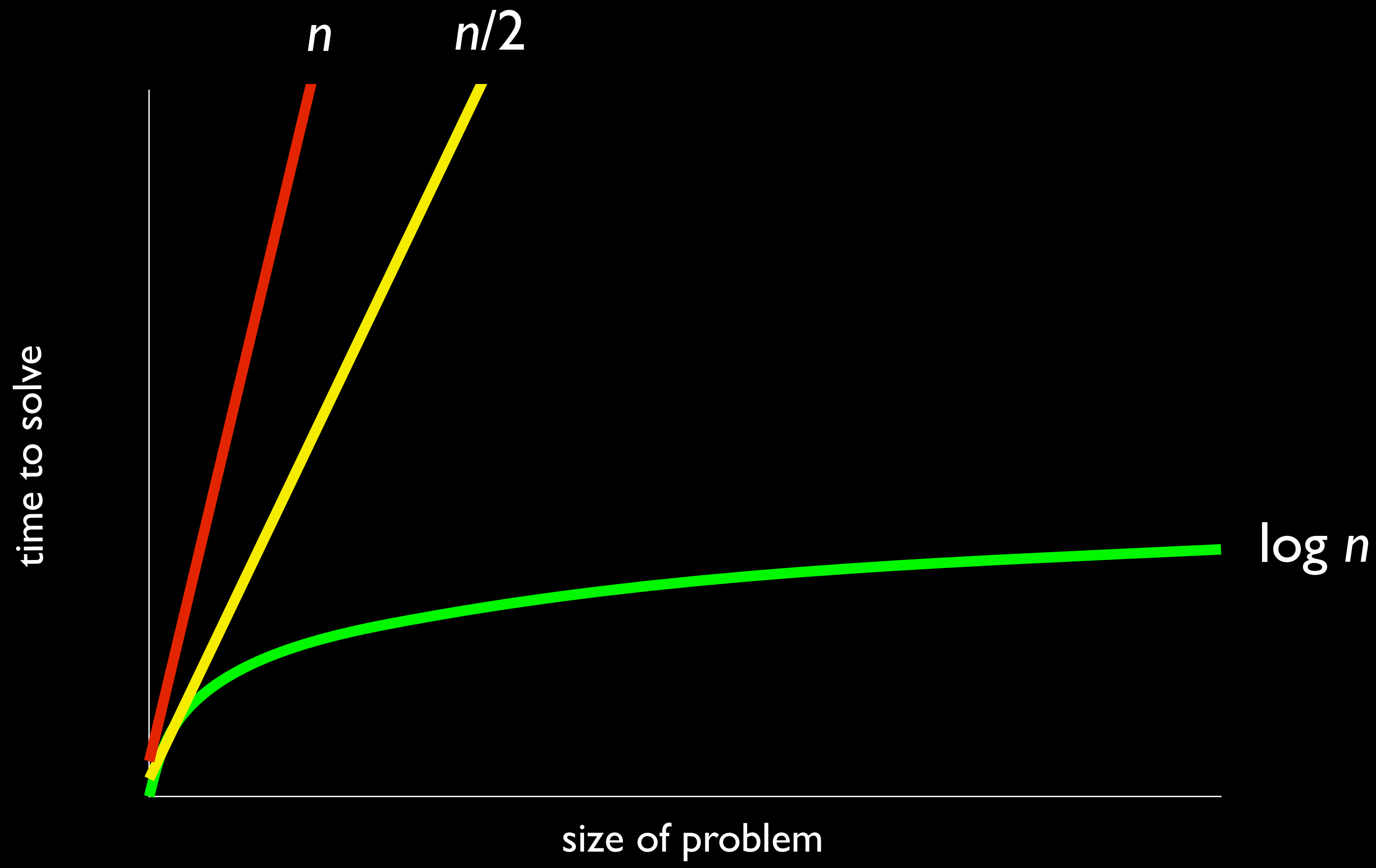


time to solve



size of problem





- 1 stand up and assign yourself the number 1
- 2 pair off with someone standing,
add your numbers together,
and adopt the sum as your new number
- 3 one of you should sit down;
the other should go back to step 2


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




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