



Center for Creative Arts

AP Calculus AB

Mr. Nader Mohyuddin
2016-17

gnaw-there
moe-you-dean

نادر محي الدين

Starting off...



attendance

agenda

- ❑ Brain exercises
- ❑ Assigning Books
- ❑ Student Information Form
- ❑ Syllabus, grading system
- ❑ Math as art; reading assignment



What do you notice?



Why are all drain covers round?

Privately think of at least two possible reasons

Tell your elbow partner your ideas.

The person who woke up earlier goes first.

Share out with your table.



A cast iron manhole cover can weigh as much as 200 pounds.



Round
Can't slip
through
a smaller
opening.

Square
Look out
below.

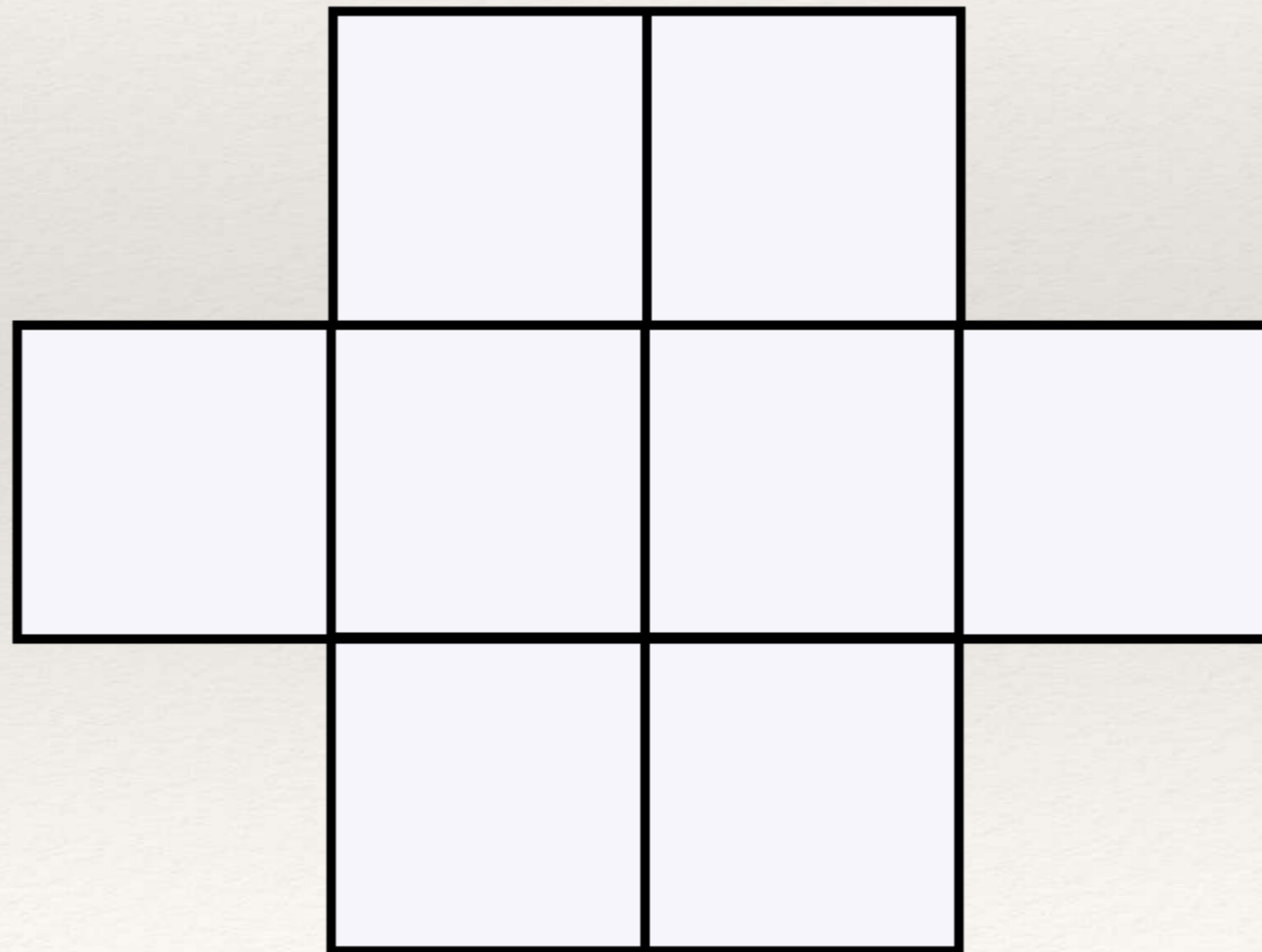


True or False?

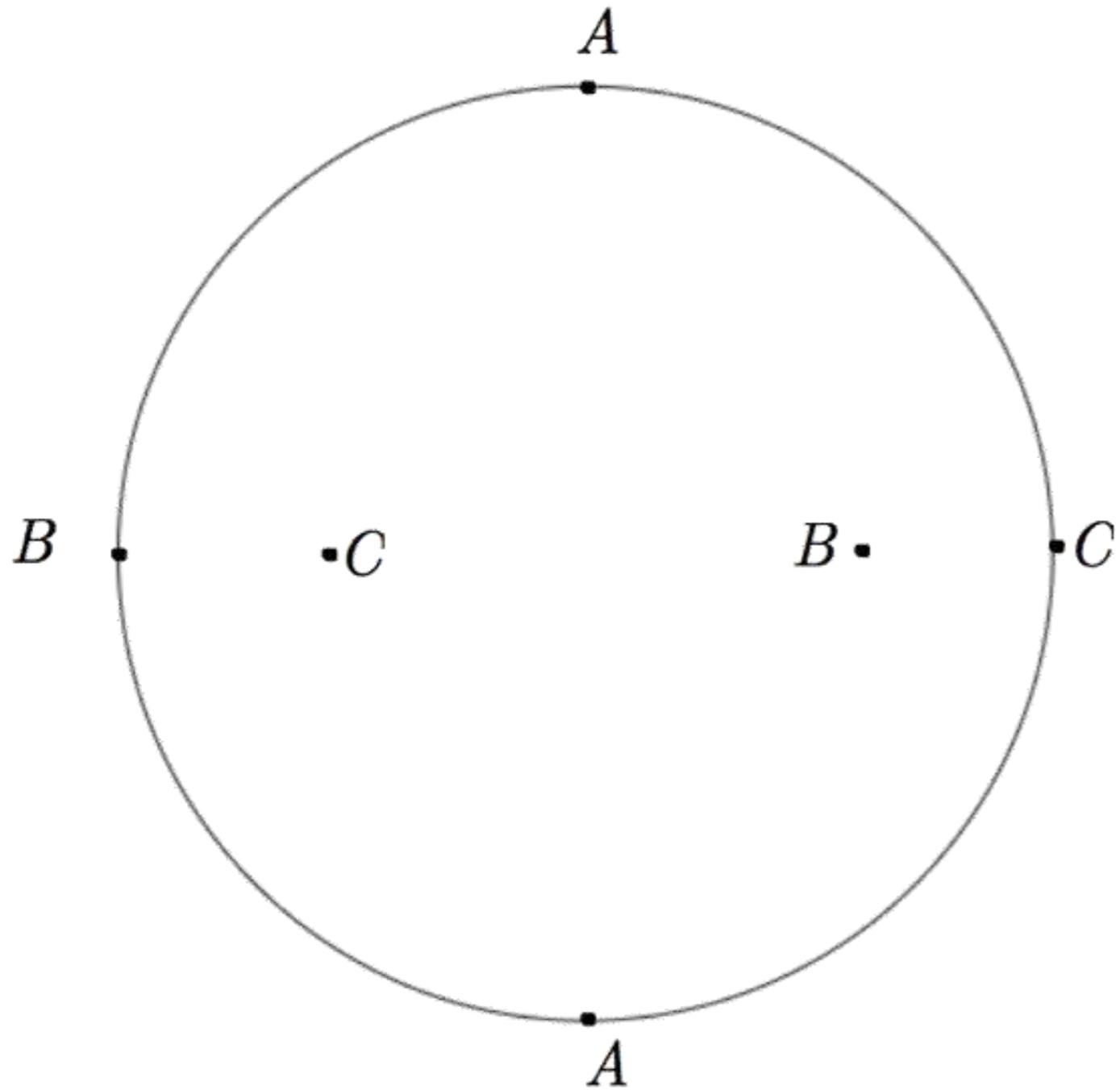
At some point, your height in inches equaled your weight in pounds.

Grid Game

Place the digits 1 through 8 into the boxes such that no two consecutive numbers touch, even diagonally.



Polya's Disk



Working entirely within the circle, can you connect A to A , B to B , and C to C so that the connecting, continuous curves avoid intersection?

Find a solution or prove that a solution is impossible.

Grid Game, Revisited

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Find a ten digit number that describes itself. The first digit tells how many zeroes there are in the whole number; the second digit tells how many 1's there are; the third digit tells how many 2's there are—and so on until the last digit tells how many 9's there are.

multiply mentally

No writing...multiply in your head

$$(x-a)(x-b)(x-c)\dots(x-z)$$



textbooks

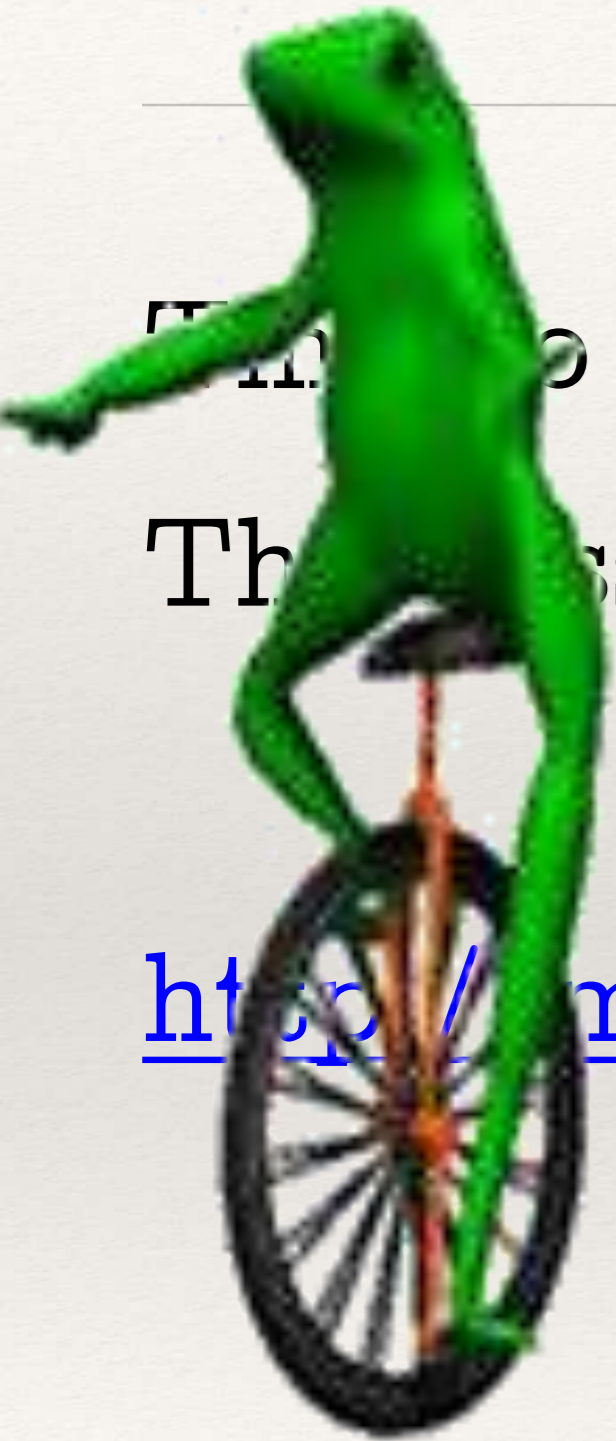
Harambe says:

Always bring your notebook!

- ❑ Write your name on the inside cover; note the number (will get from you later)
- ❑ Bring to class every day
- ❑ Always take notes in a bound notebook you only use for this class



Who are you??



Then visit...

The business website!!

<http://mcalc.weebly.com>



Text Reminders!

TO: 81010

@calc167

Send

Syllabus

Important Points

- Dividers in Binder
- Math fee
- No notes on loose leaf
- Limit time out of class
- No food or drinks besides water

Syllabus

- Calculator and Journal
- Goals and Homework
- Greeting and centering
- Warm up and lesson
- Summary and clean up

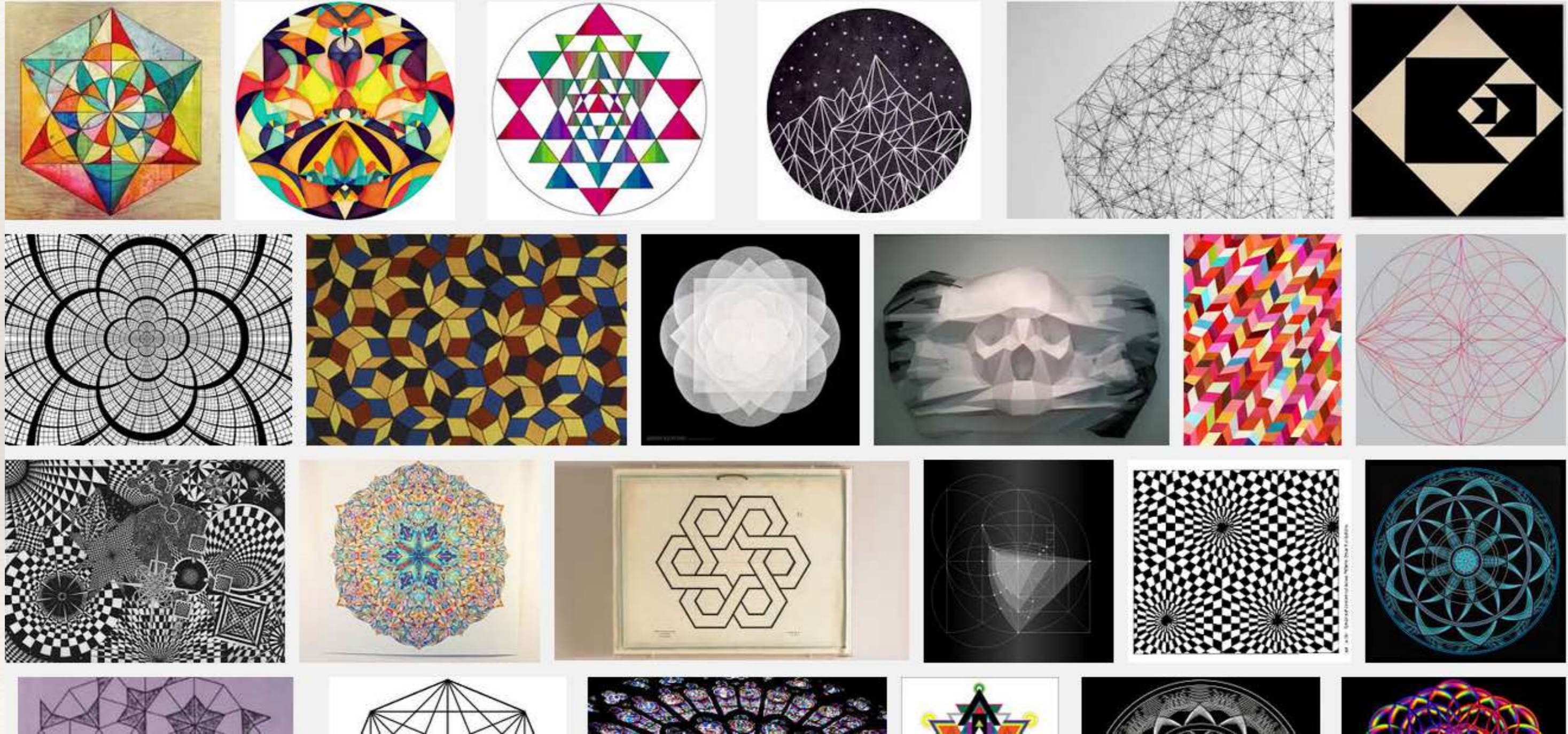
Standards Based Grading

- Measures what you know, not how well you take tests or how much you memorize
- YOU are in control of your grade, not me
- Failure is not an option: retest until you master the skill
- Growth is rewarded
- Homework, homework, homework

Advice from Last Year's Students

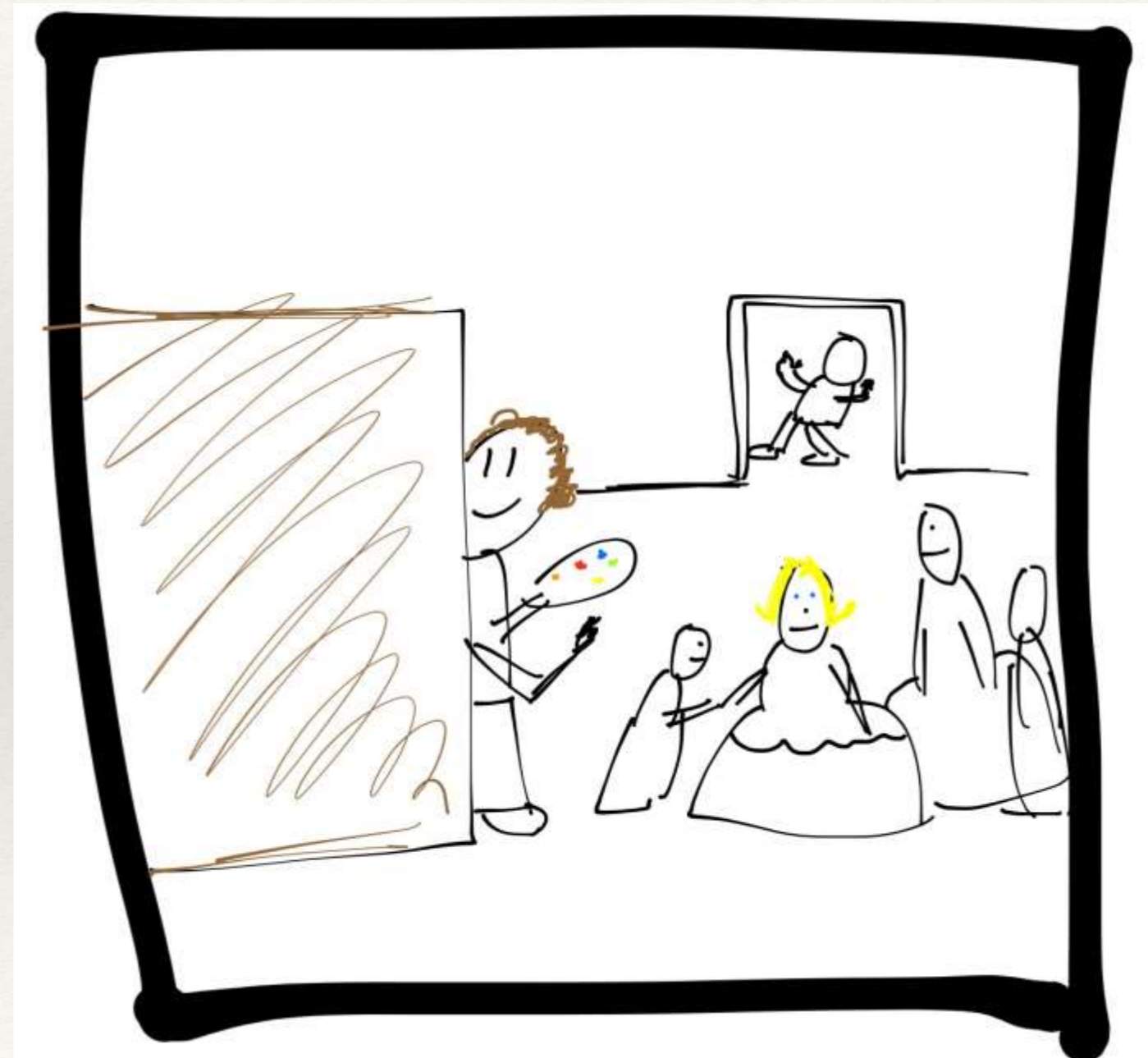


Math is an art.



Math is an art.

Which painting is better?



Which math is "better"?

$$3x^2 - 12x - 63 = 0$$

$$3(x^2 - 4x - 21) = 0$$

$$3(x-7)(x+3) = 0$$

$$\begin{array}{r} x-7=0 \\ \underline{+7} \quad \underline{+7} \end{array}$$

$$\underline{x=7}$$

$$\begin{array}{r} x+3=0 \\ \underline{-3} \quad \underline{-3} \end{array}$$

$$\underline{x=-3}$$

$$3x^2 - 12x - 63 = 0$$

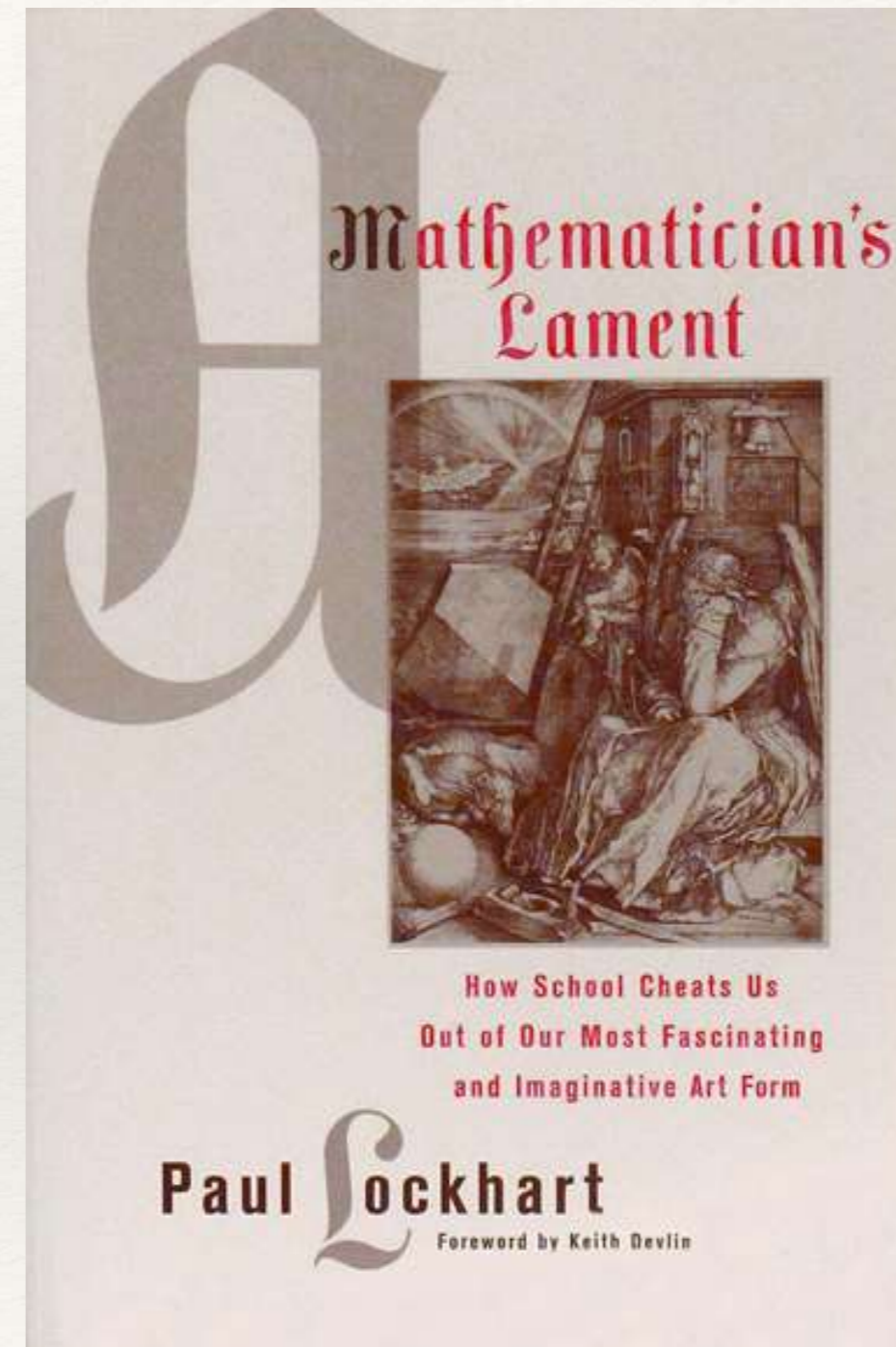
$$\underline{x=7}, \quad \underline{x=-3}$$

Think back to our brain exercises...

What skills did they require?

“A Mathematician’s Lament”

- ❖ What is a lament?
- ❖ Dr. Paul Lockhart
 - ❖ Ivy League math professor
 - ❖ Quit teaching university
 - ❖ Reforming math education



Homework

- ❖ Have parents fill out survey online
- ❖ Pay \$5 math fee
- ❖ Get supplies if needed
- ❖ Finish reading *A Mathematician's Lament*