Quality Class

Międzynarodowe podejście do dydaktyki matematyki w złożonym świecie

MARTA BREMBOR

Quality Class

„Quality class is a 10 days exchange program for teacher-students. During quality class different countries, different cultures and different opinion about mathematics education meet."

Polska, Czechy, Holandia, Włochy, Portugalia

The participating teacher-students aim to be teacher for pupils of 12 – 18 y.o. […] also elementary school teacher-students.

The teacher-students should meet following qualifications:
•passed more than 50% of their professional formation
•have some practice in classroom.
•are flexible, cooperative; like to work in a group
•are able to communicate in English
•are interested in didactics of mathematics education

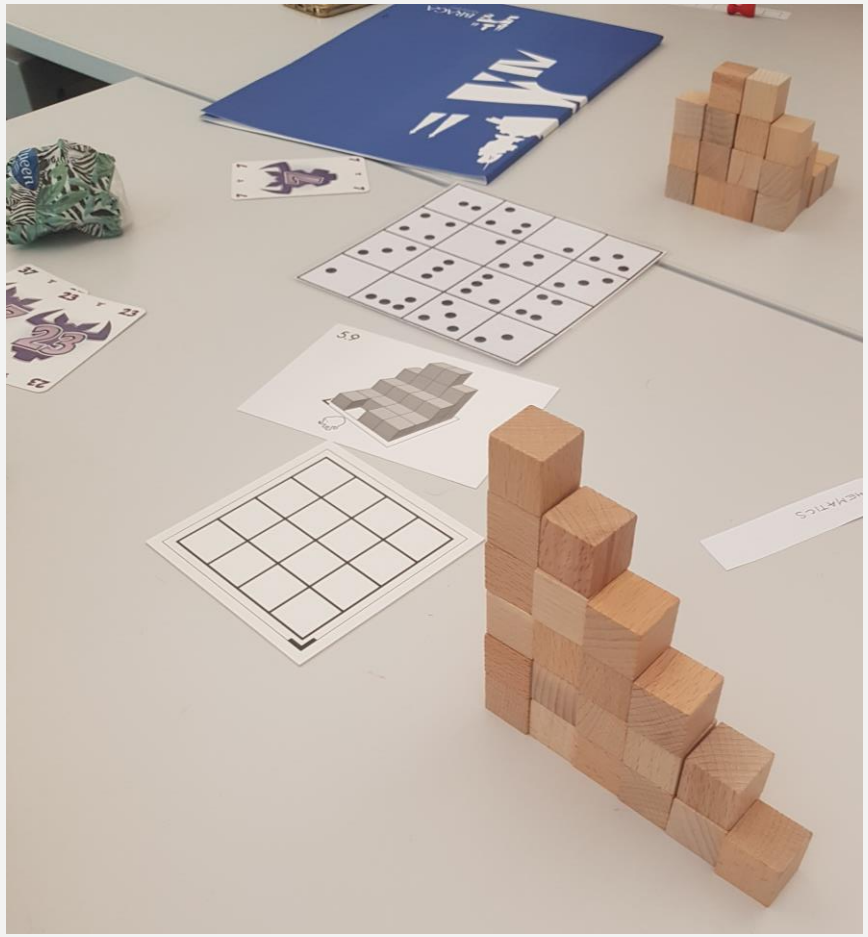
Aims.

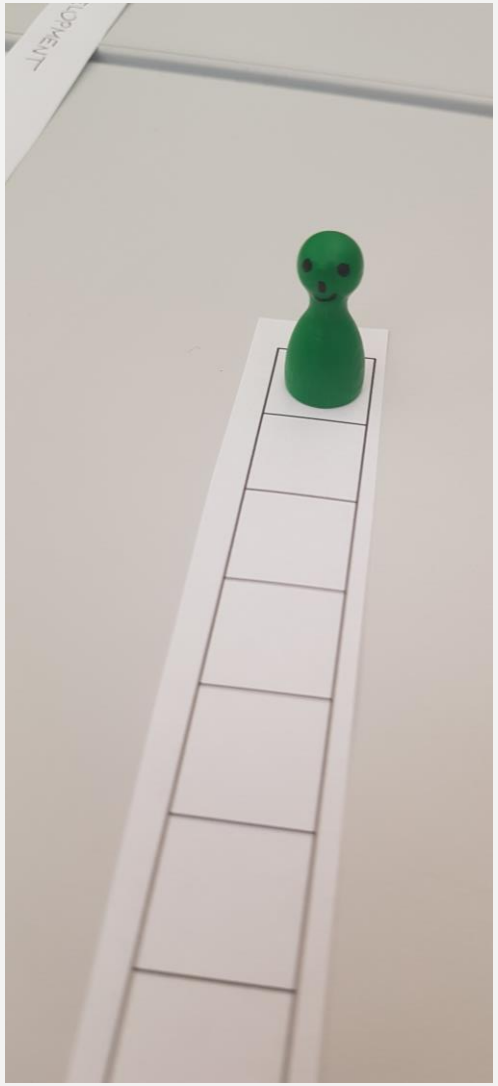
- learn to work in a multicultural environment,
- learn how to find your way in an international conference,
- experience being a member of an international team.
- discover and develop knowledge about teaching mathematics and be aware of what educational research can bring you in connection with personal experiences i.e. in classroom.

Quality Class

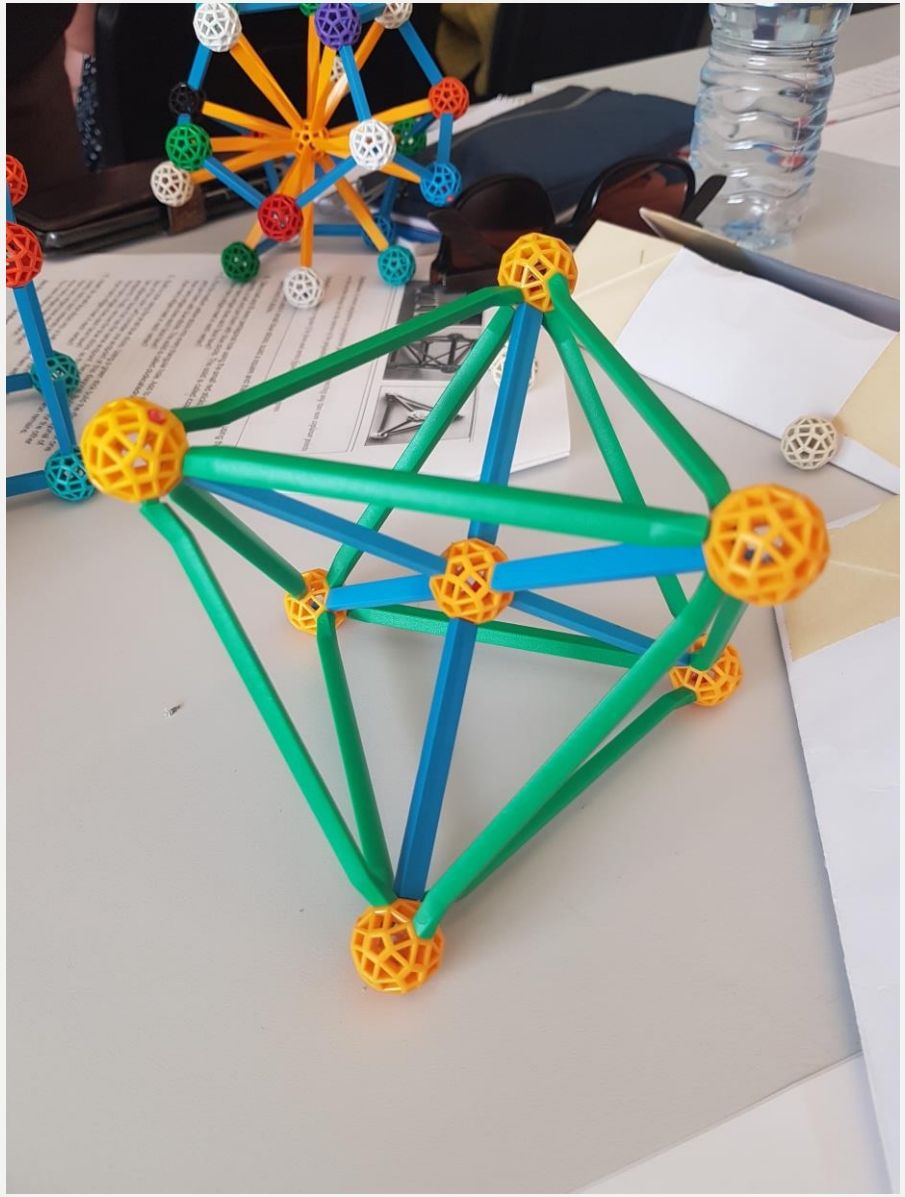
„4 days in advance of the international conference the participants of the quality class come together.”

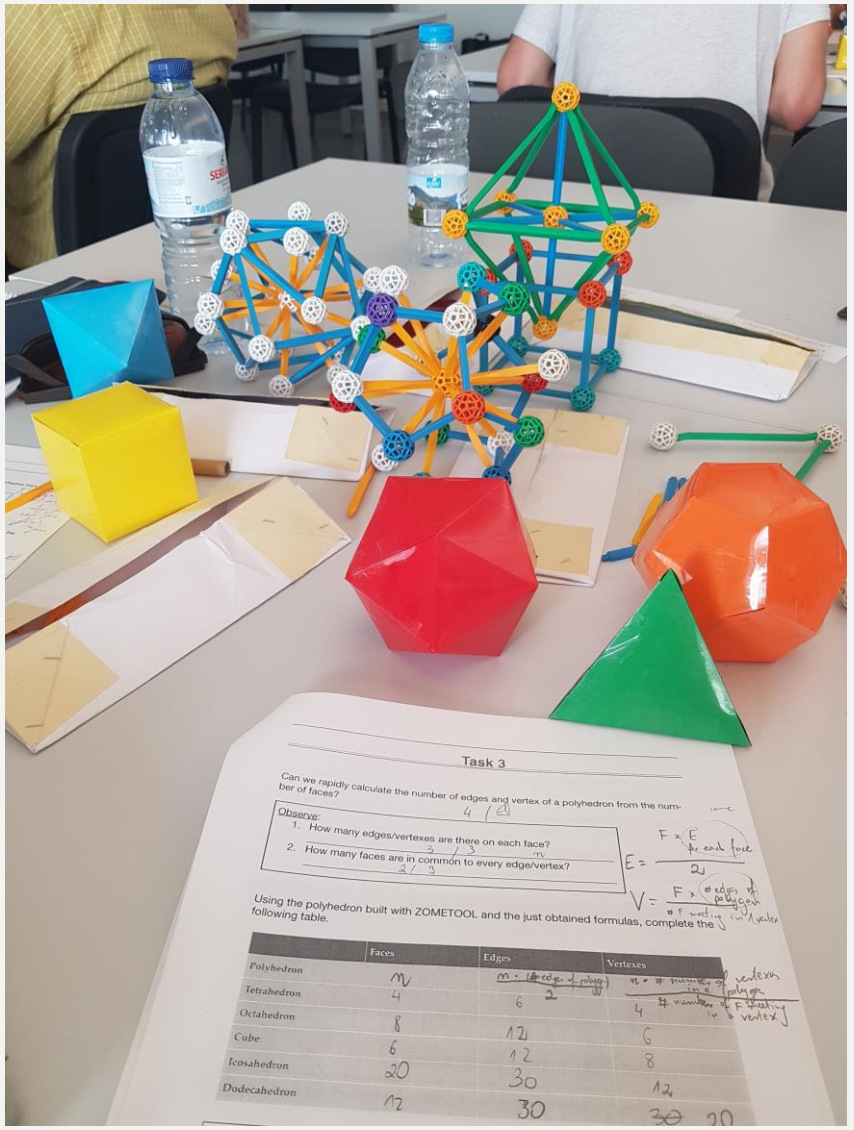
Polska, Czechy, Holandia, Włochy, Portugalia



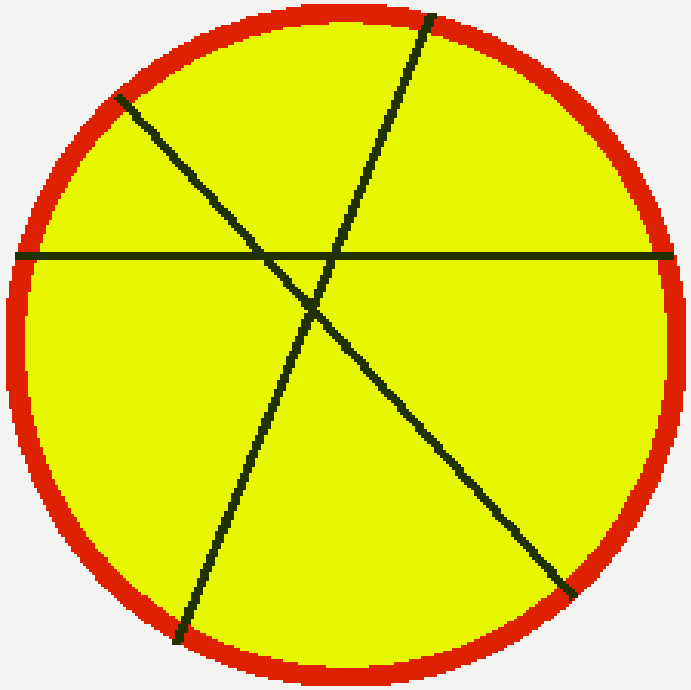


Hejny's method

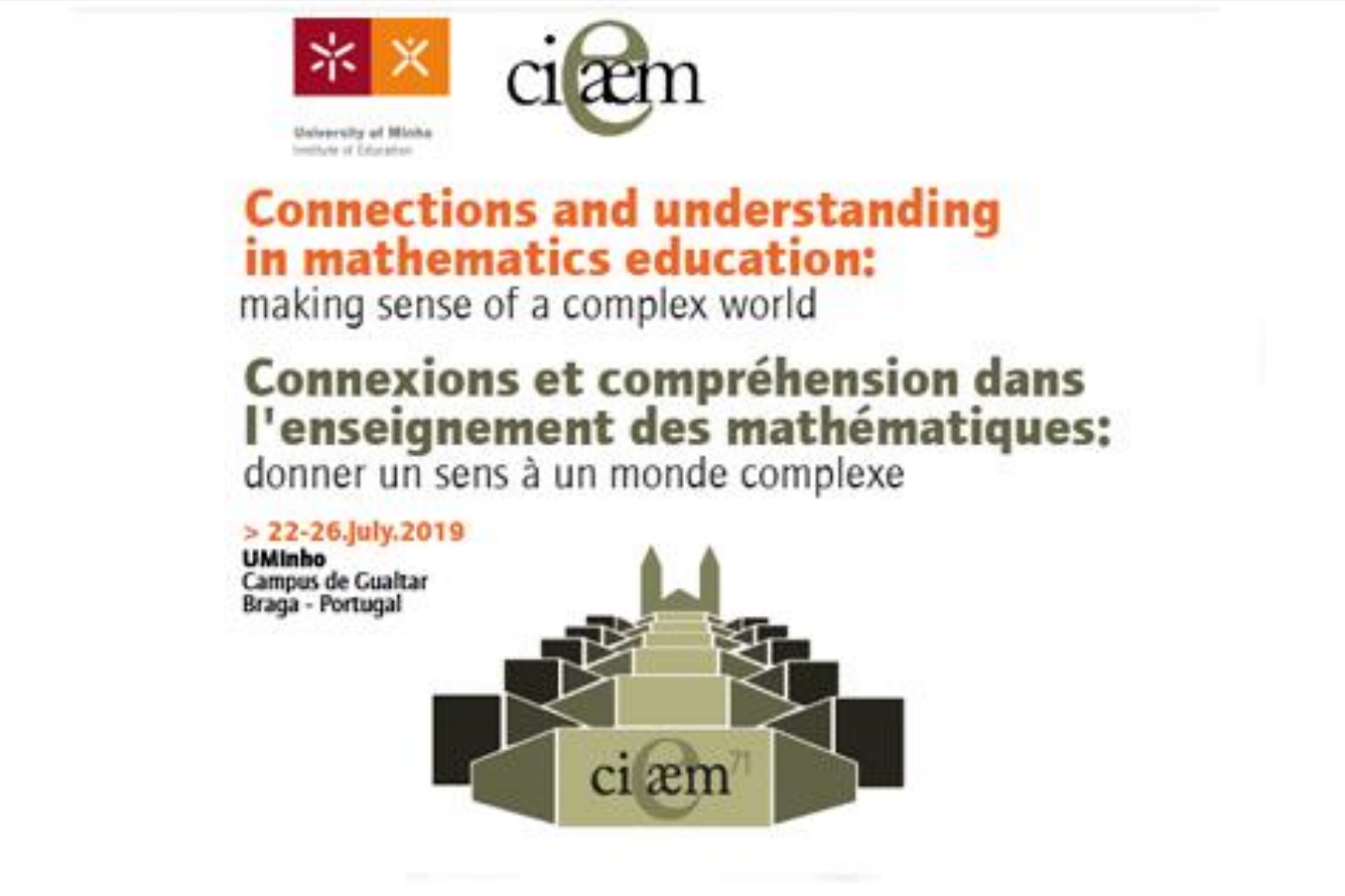



Task 3
Can we rapidly calculate the number of edges and vertex of a polyhedron from the number of faces?
Observe:
1. How many edges/vertexes are there on each face?
2. How many faces are in common to every edge/vertex?
Using the polyhedron built with ZOMETOOL and the just obtained formulas, complete the following table.
Faces
Edges
Vertexes
Polyhedron
Tetrahedron
Octahedron
Cube
Icosahedron
Dodecahedron

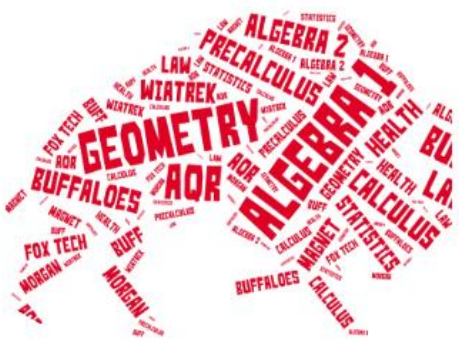
Zometool

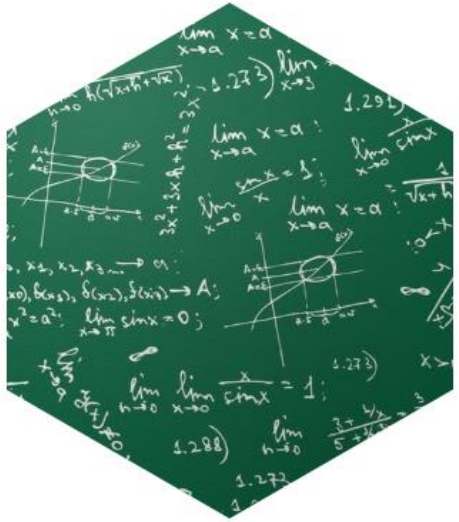


Zadania problemowe



Part of the program is a visit to an international conference about didactics of mathematics education.





Learning in an increasingly complex world

How can we re-conceptualise learning with understanding in a complex world?
How can we promote learning with understanding in an increasingly complex world?
What features should a task have in order to promote learning with understanding?
How to research the complex

Mathematics Teacher Education

What kind of mathematics training should teachers have in order to be able to promote learning with understanding?
How can teacher training contribute to establishing connections between the various areas of Mathematics?

Teaching for connections and understanding

In relation to connections and understanding, what kind of teaching methods are more appropriate?
How do we evaluate and/or research the resources from the perspective of the connections and the

Mathematics Education with Technology

How can ICTs contribute to learning rich in connections, in an increasingly complex world?
How can ICT be used in teacher training to promote understanding in mathematics?
How can we use ICT as teaching-learning tools.

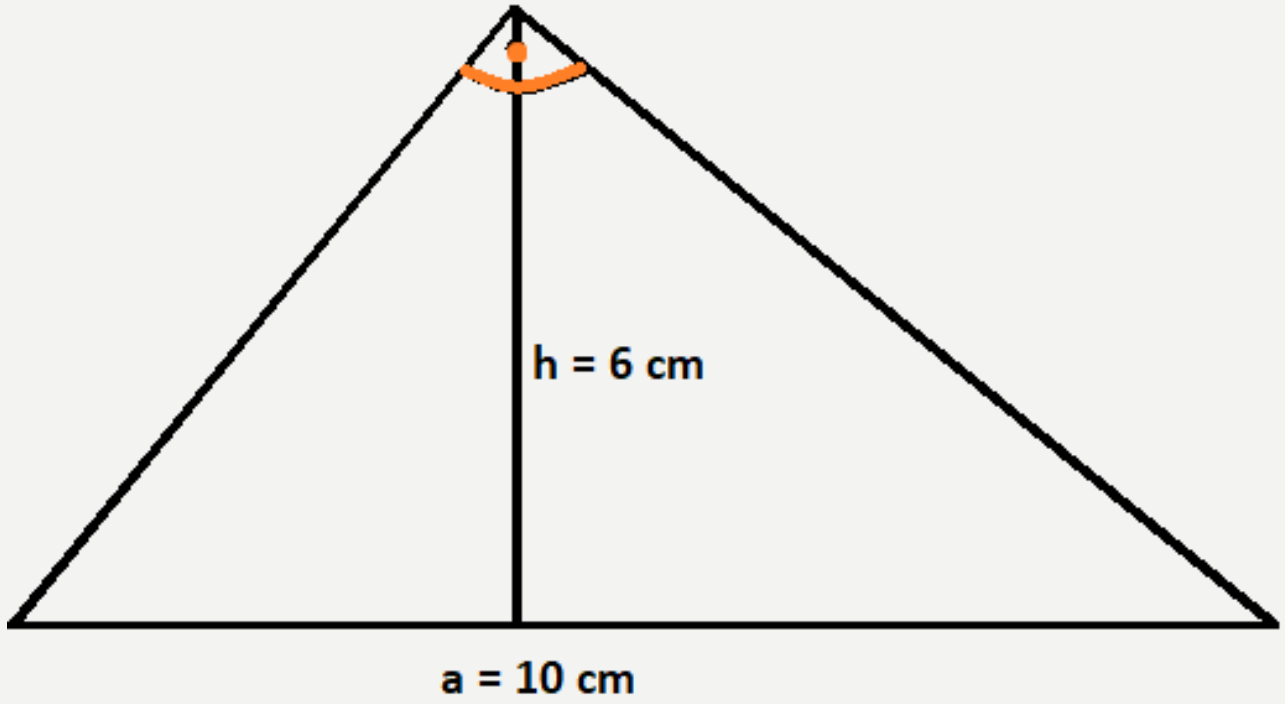
Connections with culture

Is it possible to understand peoples' lives from an ethnomathematics perspective?
How can school mathematics take into account the culture developed by young people in their everyday lives?
How to take advantage of cultural aspects to enrich the

CO DLA MNIE?

Zadanie 1

Jakie pole ma trójkąt przedstawiony na rysunku?



PROWOKACJE

Klymchuk S., Sangwin C. (2019). Connections and understanding in mathematics education. Making sense of a complex world., Provocations in mathematics: teachers' attitudes (pp. 126-132). Braga, Portugal, University of Minho.

Zadanie 2

Czy pole trójkąta o bokach 20cm, 10cm i 8cm może być większe od $50cm^2$?

Zadanie 3

Udowodnij, że (wykaż tożsamość):

$$sinx = \sqrt{1 - cos^2 x}$$

MEMY

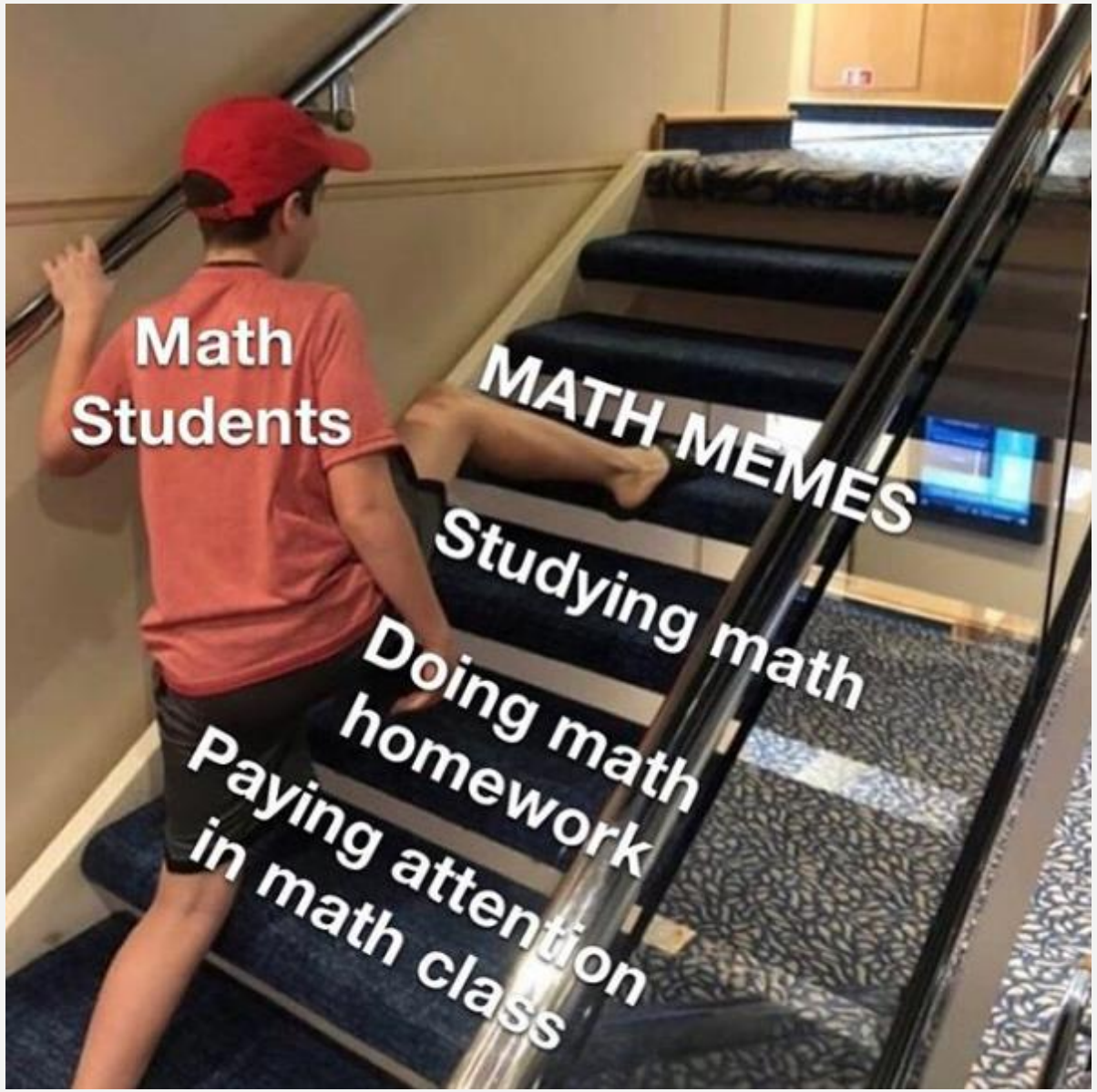
Bini G., Robutti O. (2019). Meanings in Mathematics: using Internet Memes and Augmented Reality to promote mathematical discourse. Conference Paper: CERME 11, At: Utrecht (Neterlands).


NAJGORSZY HORROR ŚWIATA...
NAUCZYCIELKA OD MATEMATYKI
Memy.pl


FAJNA TA MATEMATYKA
TAKA NIE ZA OCZYWISTA
pudelekx.pl

Nauczyciel od matematyki mówi coś o polu

ja:


Math Students
MATH MEMES
Studying math
Doing math homework
Paying attention in math class

$f(x)=$

$f'(x)=$

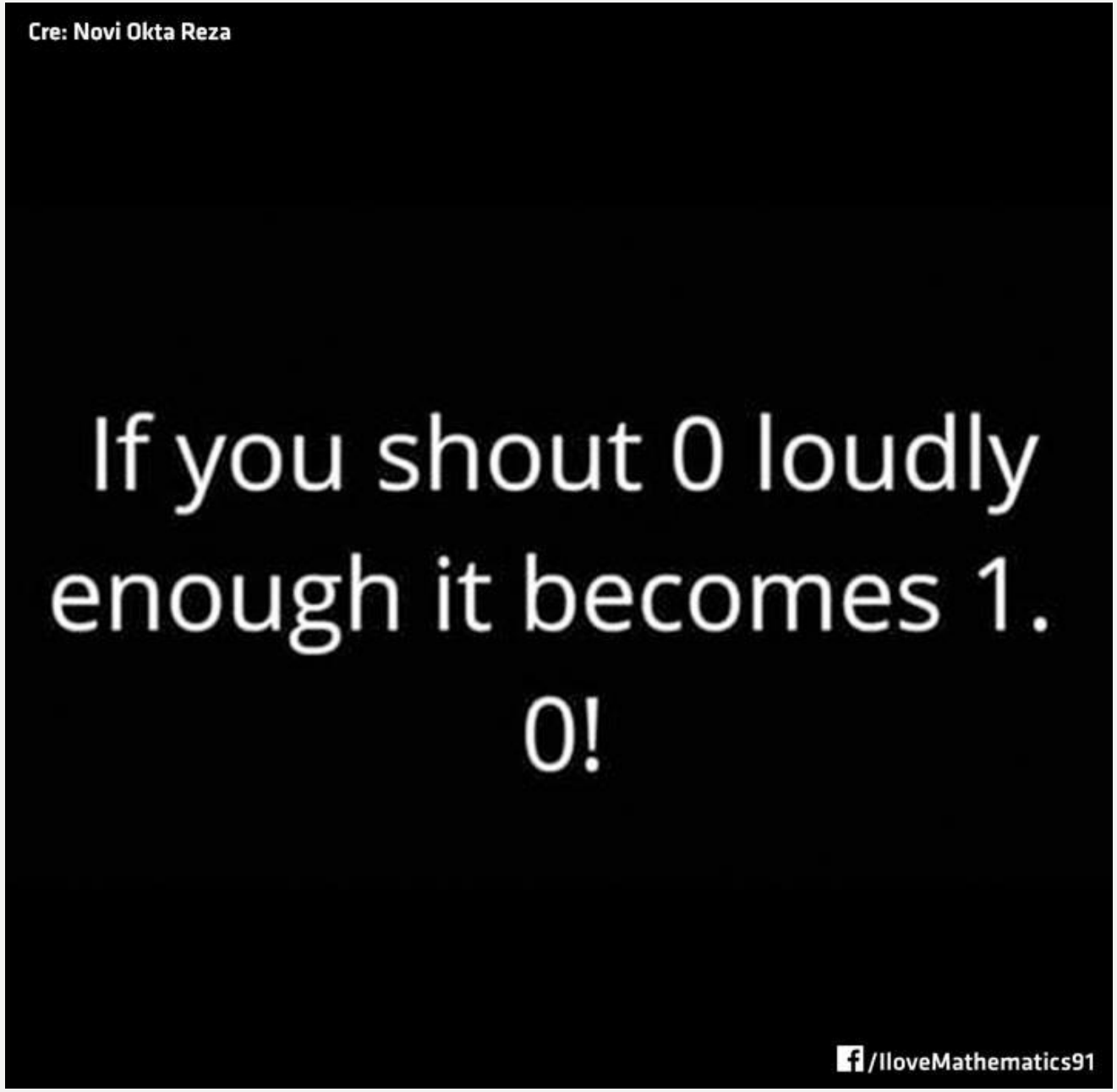
$f''(x)=$

/IloveMathematics91

f(x)

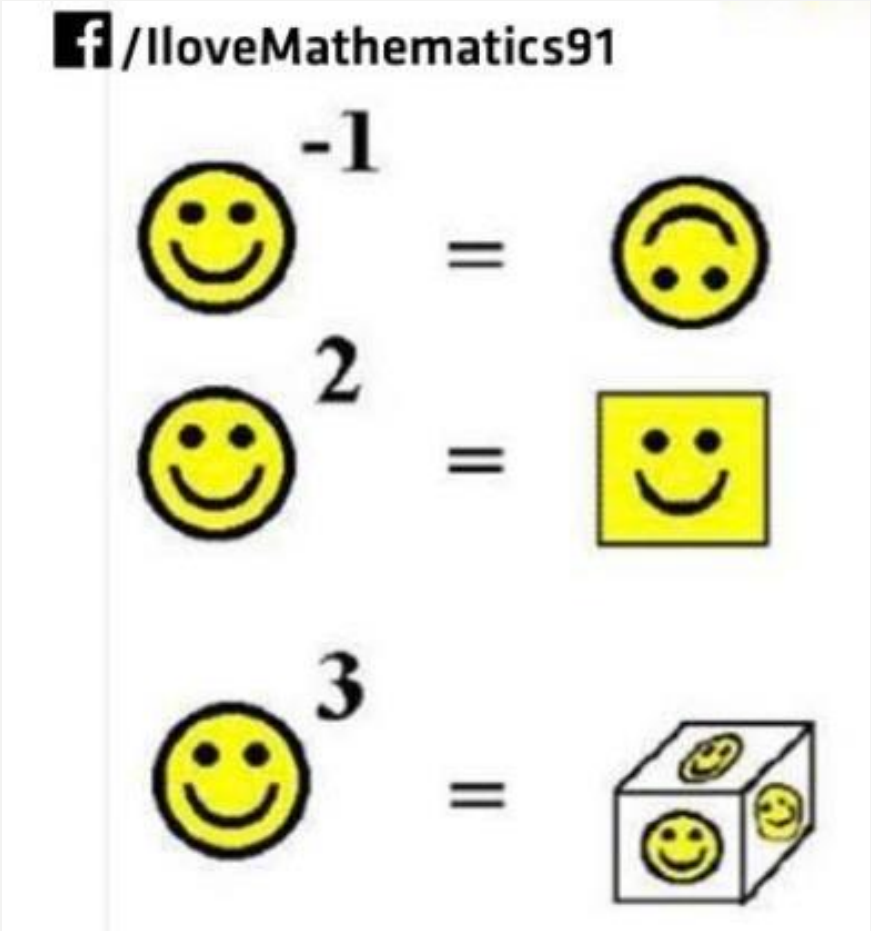
f'(x)

f''(x)



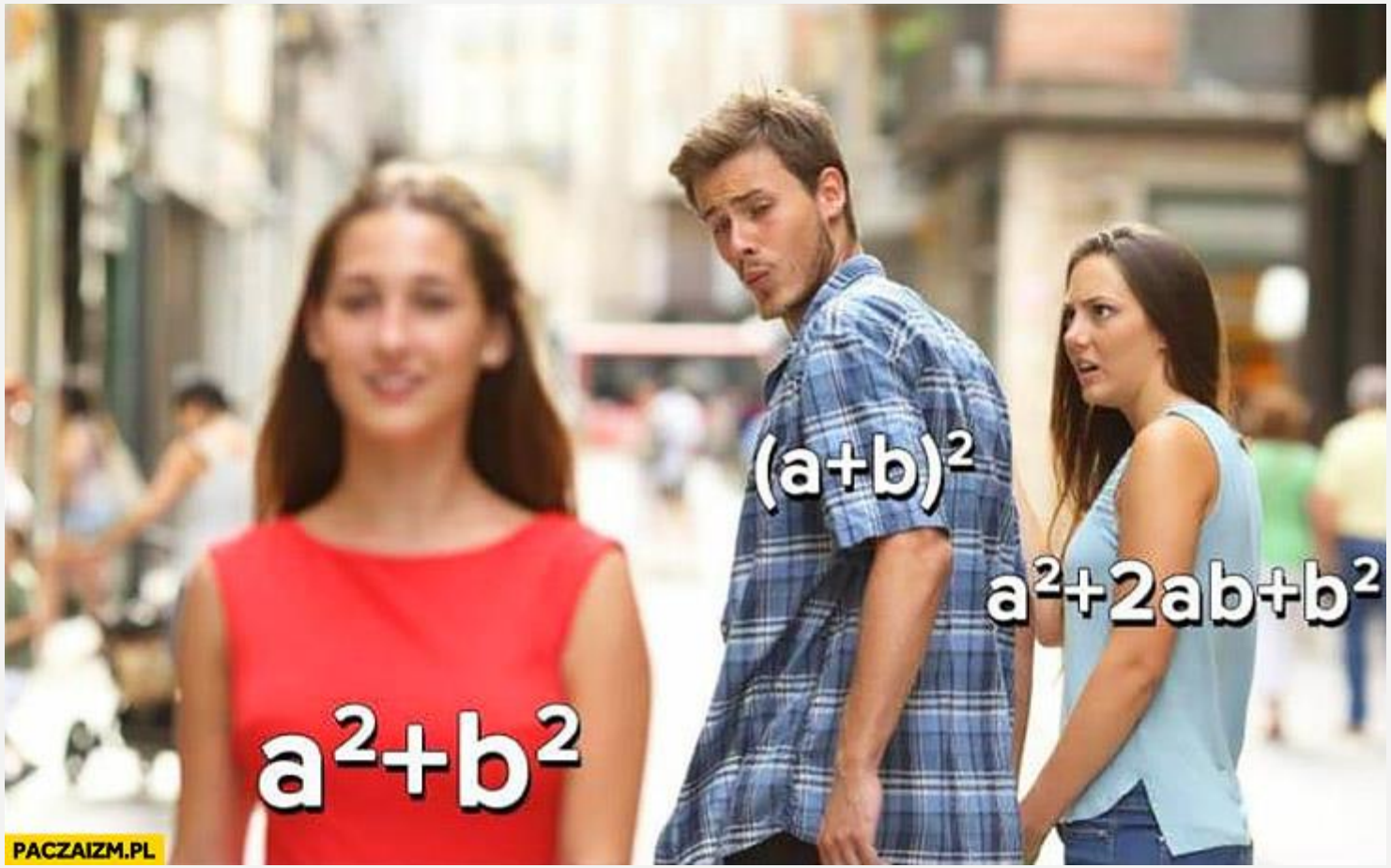
Jeśli krzyczysz 0 wystarczająco głośno, to 0 staje się 1.

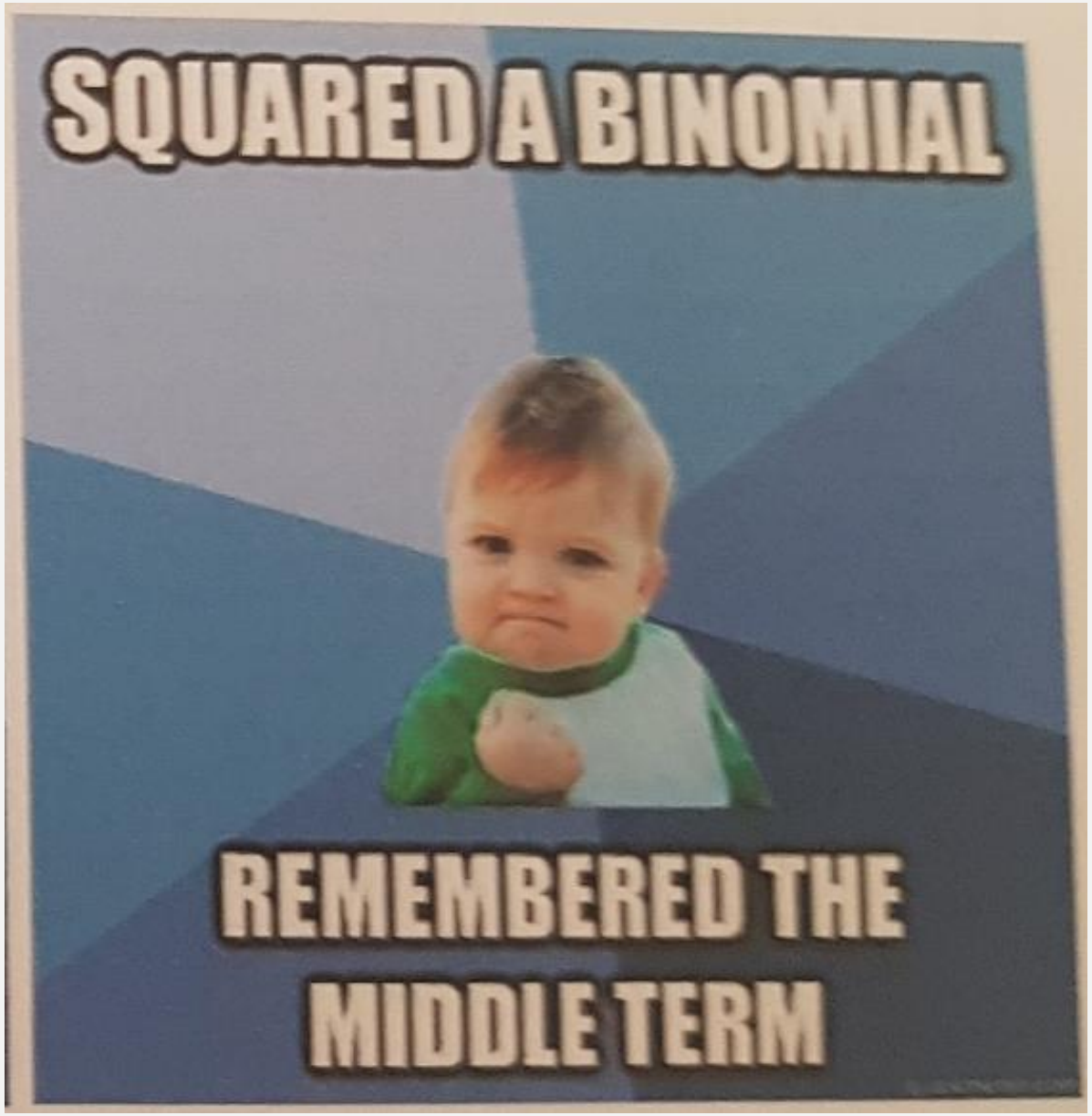
0!


/IloveMathematics91
-1
=
2
=
3
=

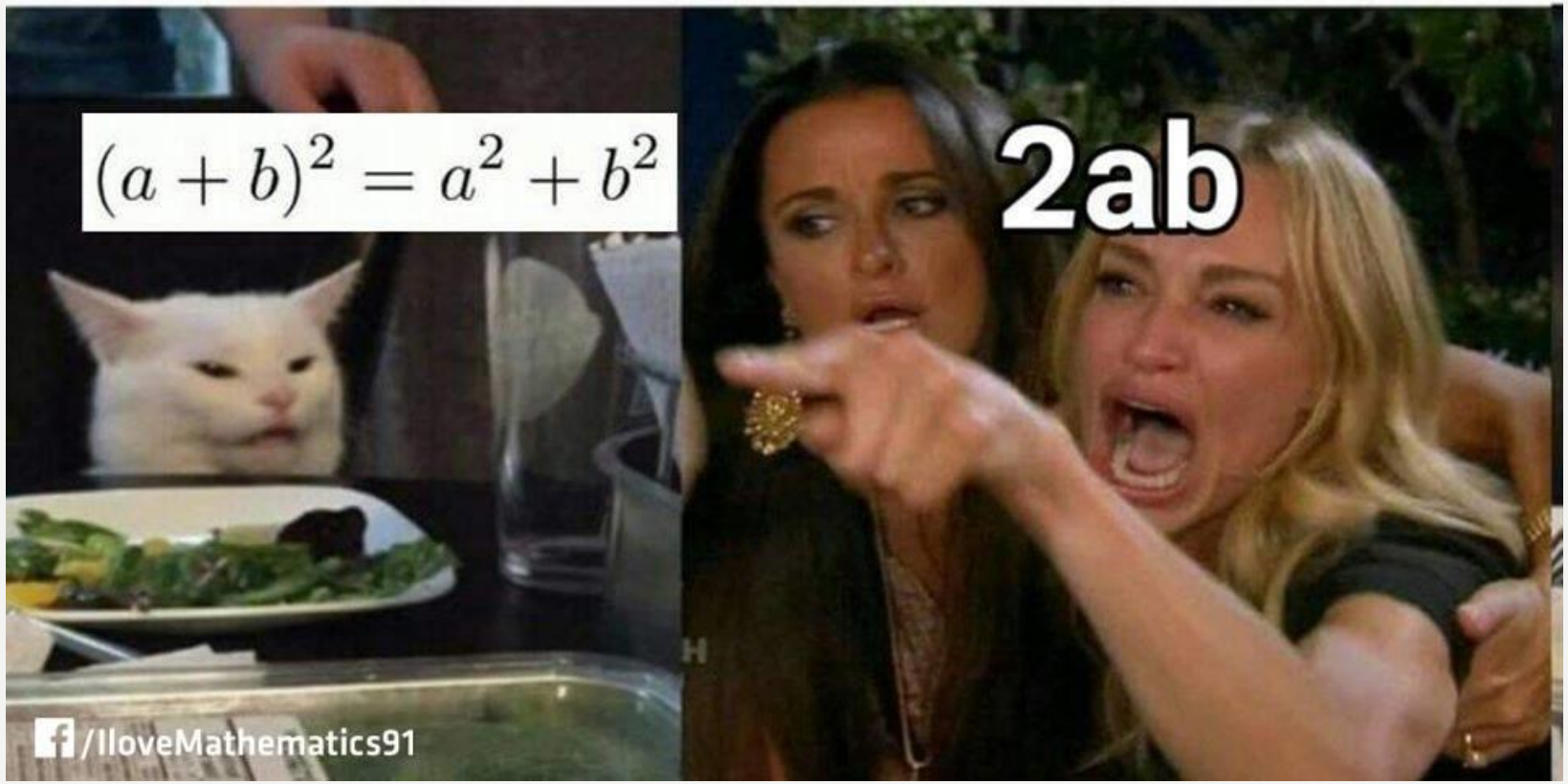

VANS
(ANS)^1/2

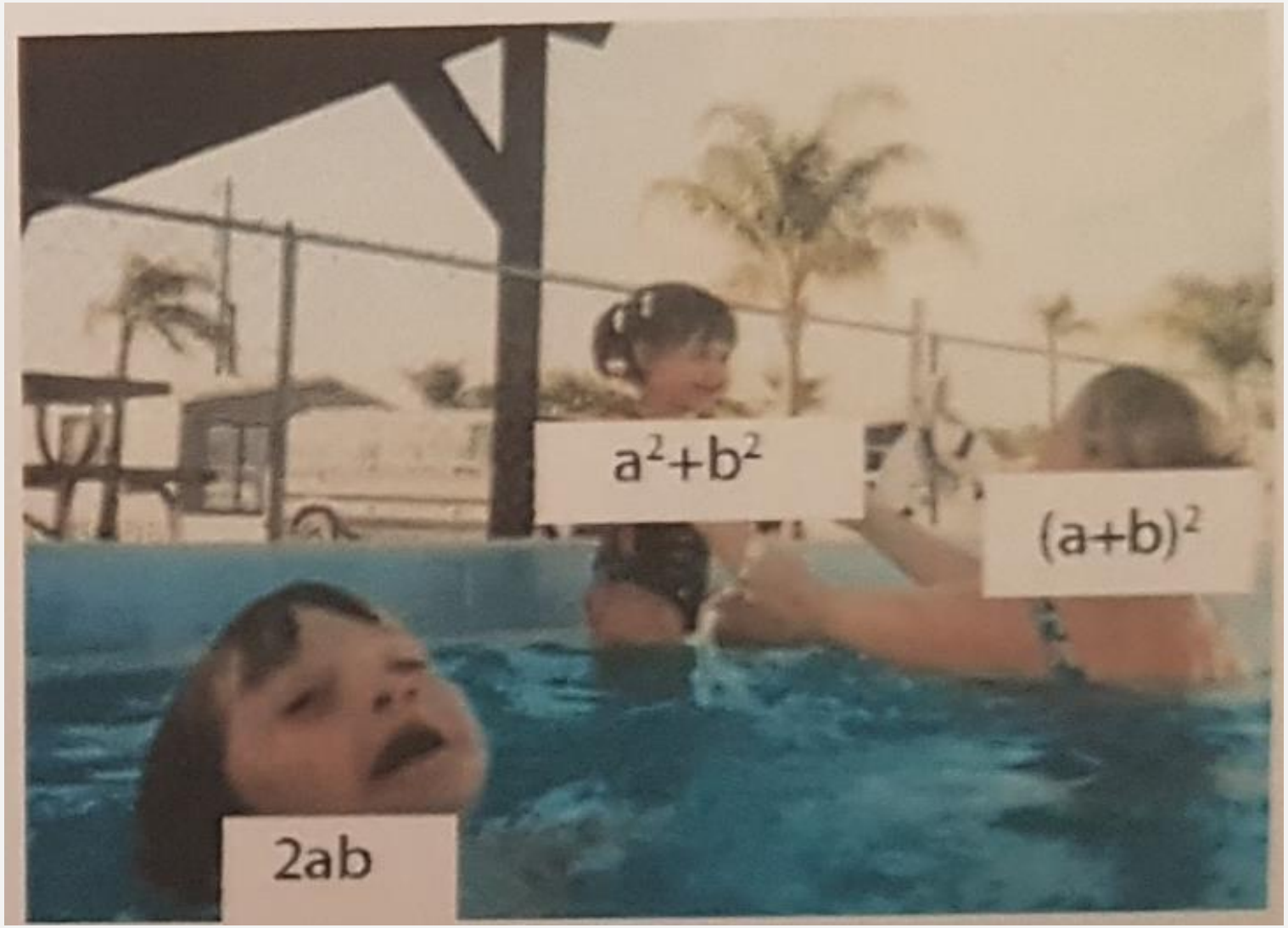
When you make $(x+2)^2$ into x^2+4 instead of x^2+4x+4


a^2+b^2
$(a+b)^2$
$a^2+2ab+b^2$
PACZAIZM.PL

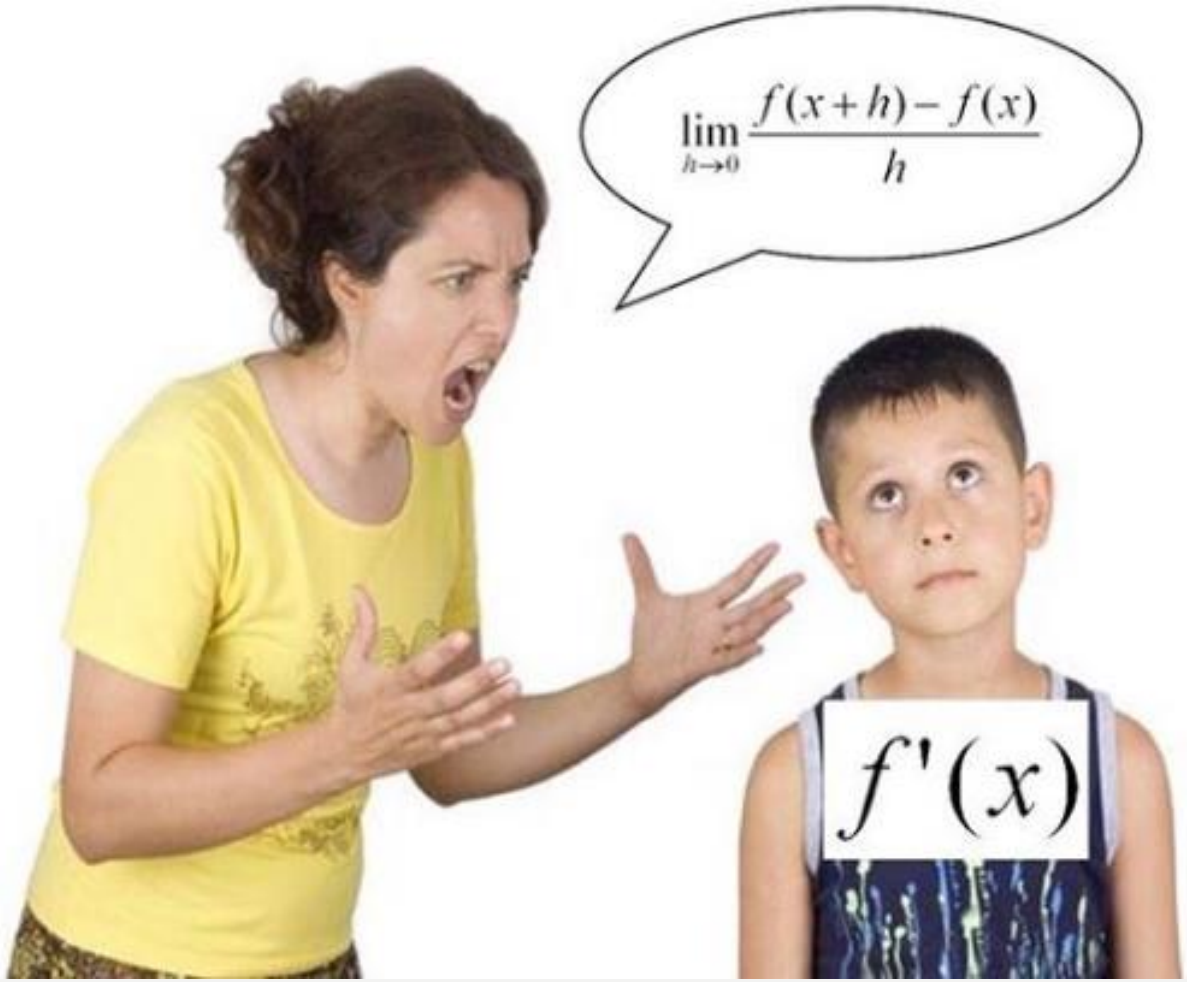

SQUARED A BINOMIAL
REMEMBERED THE MIDDLE TERM

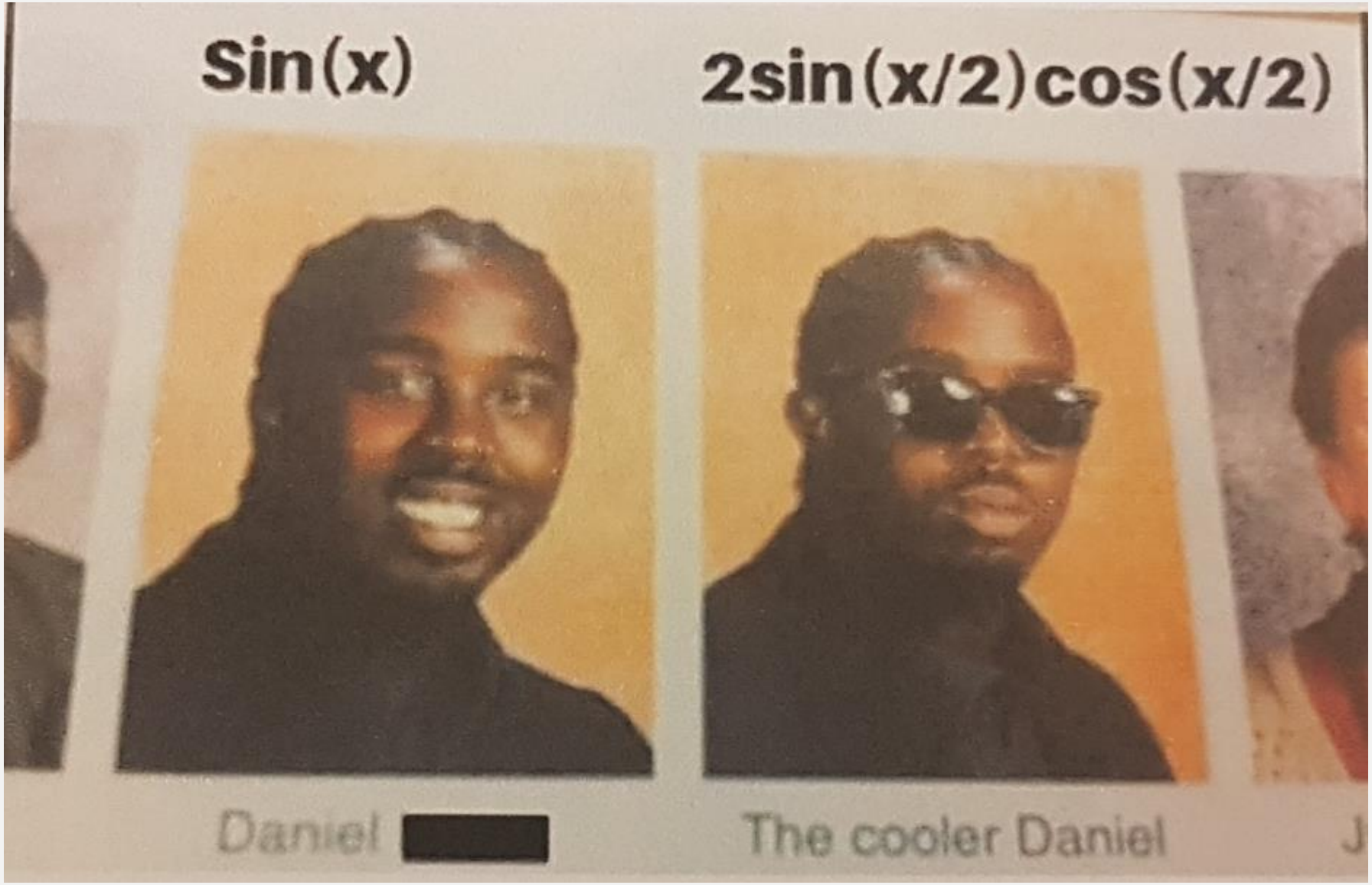
THAT PAIN...

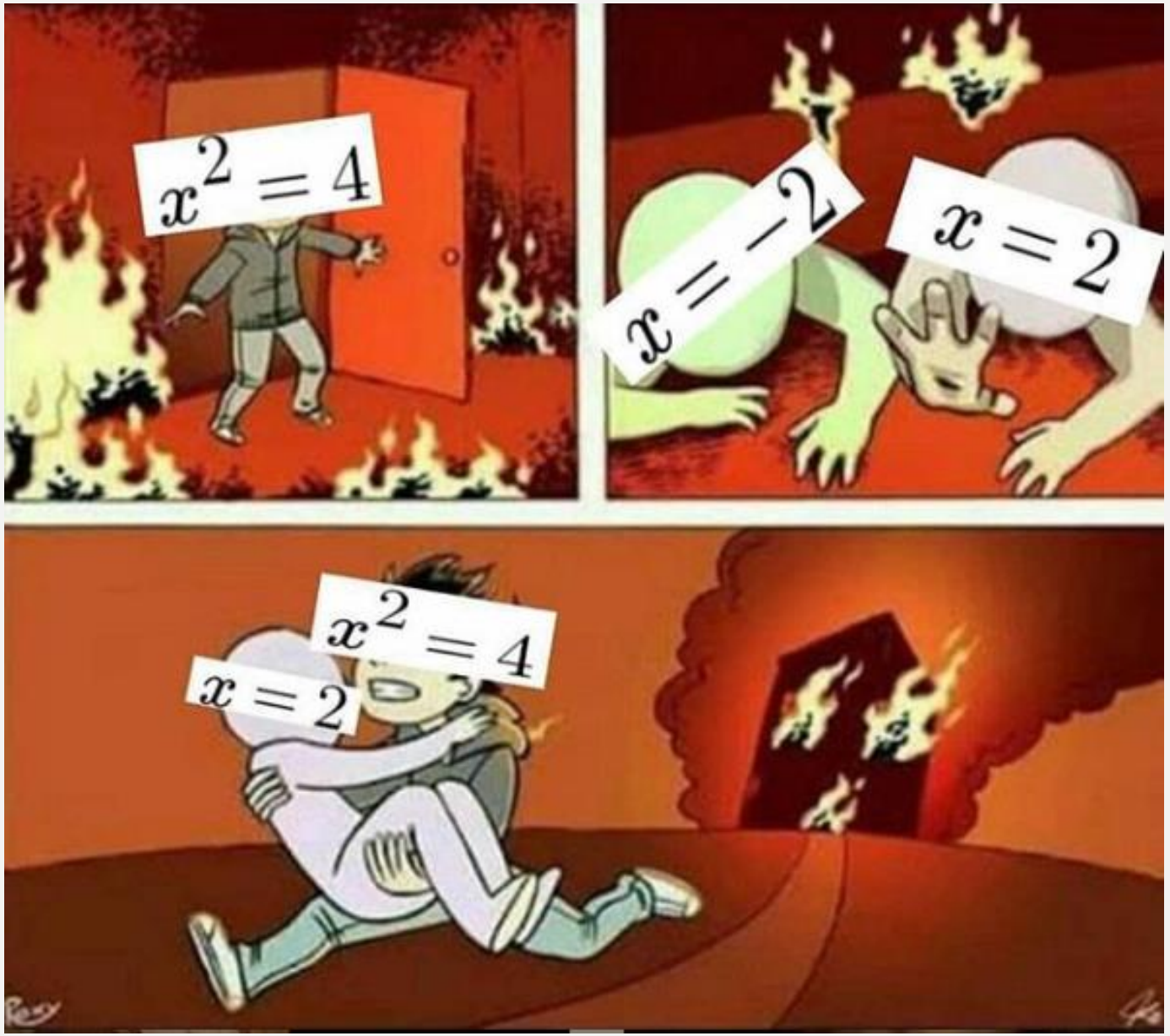


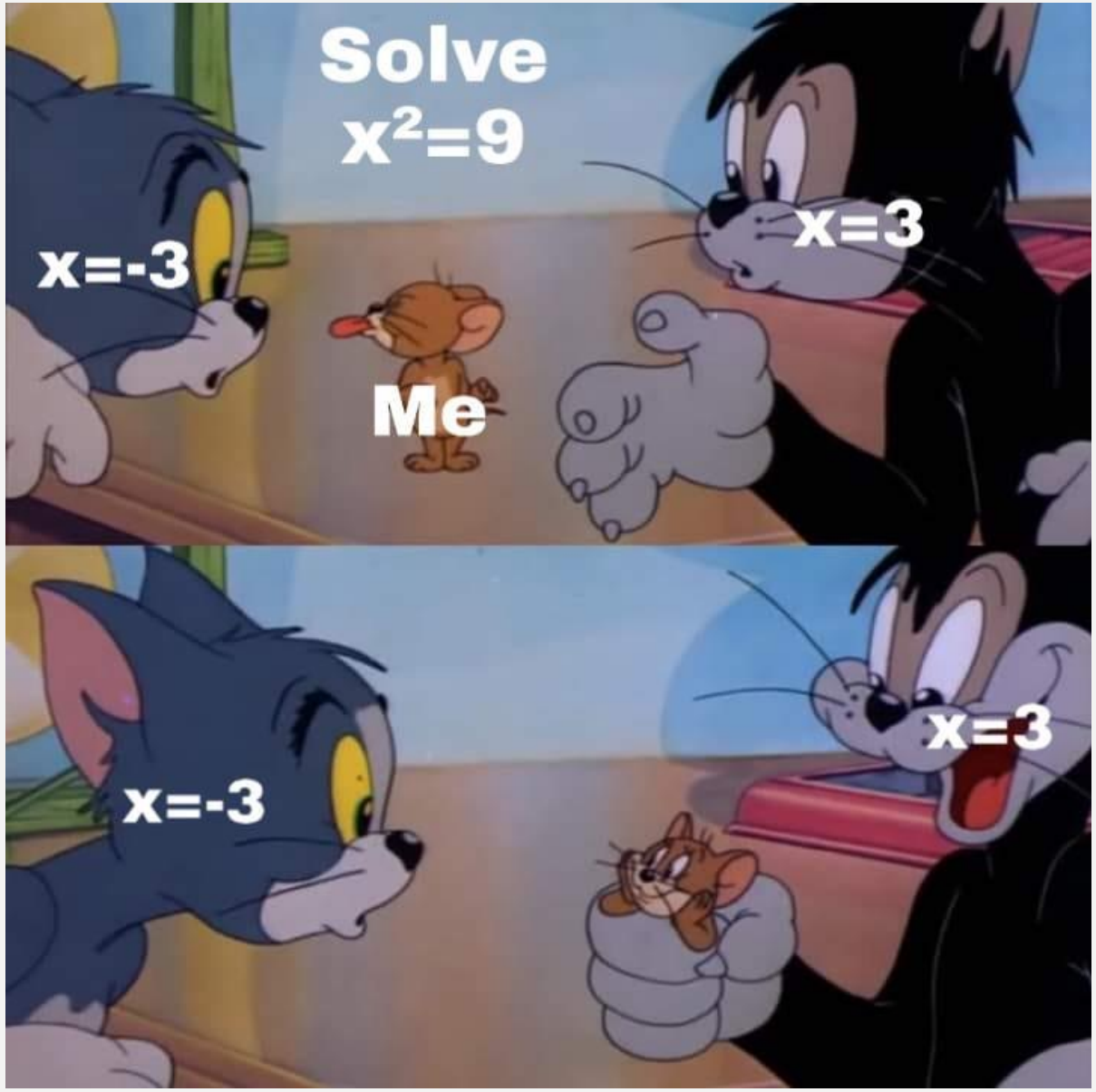

a^2+b^2
$(a+b)^2$
2ab

When your mom calls you by your full name:

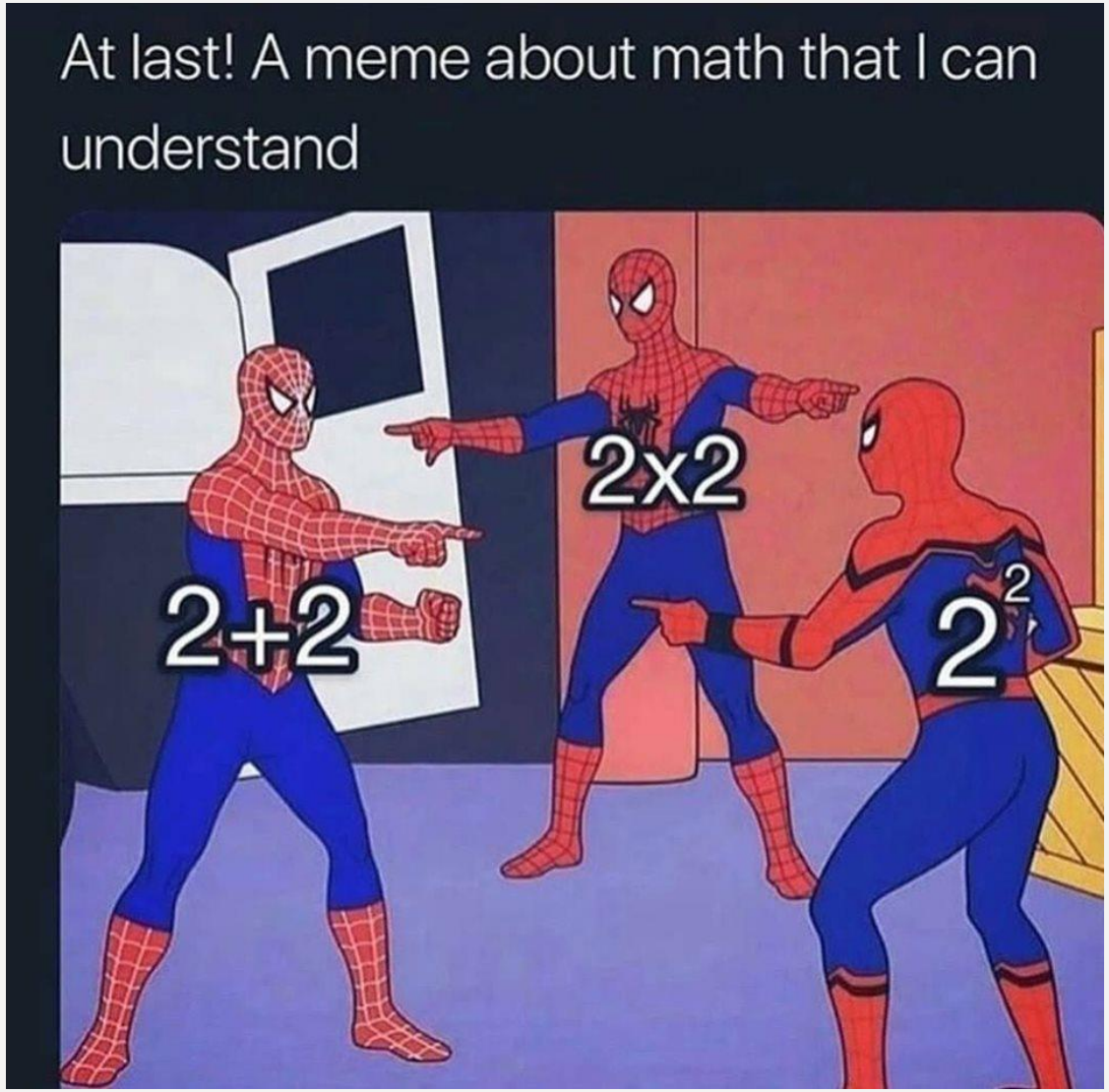



Sin(x)
2sin(x/2)cos(x/2)
Daniel [redacted]
The cooler Daniel


$x^2 = 4$
$x = -2$
$x = 2$
$x^2 = 4$
$x = 2$

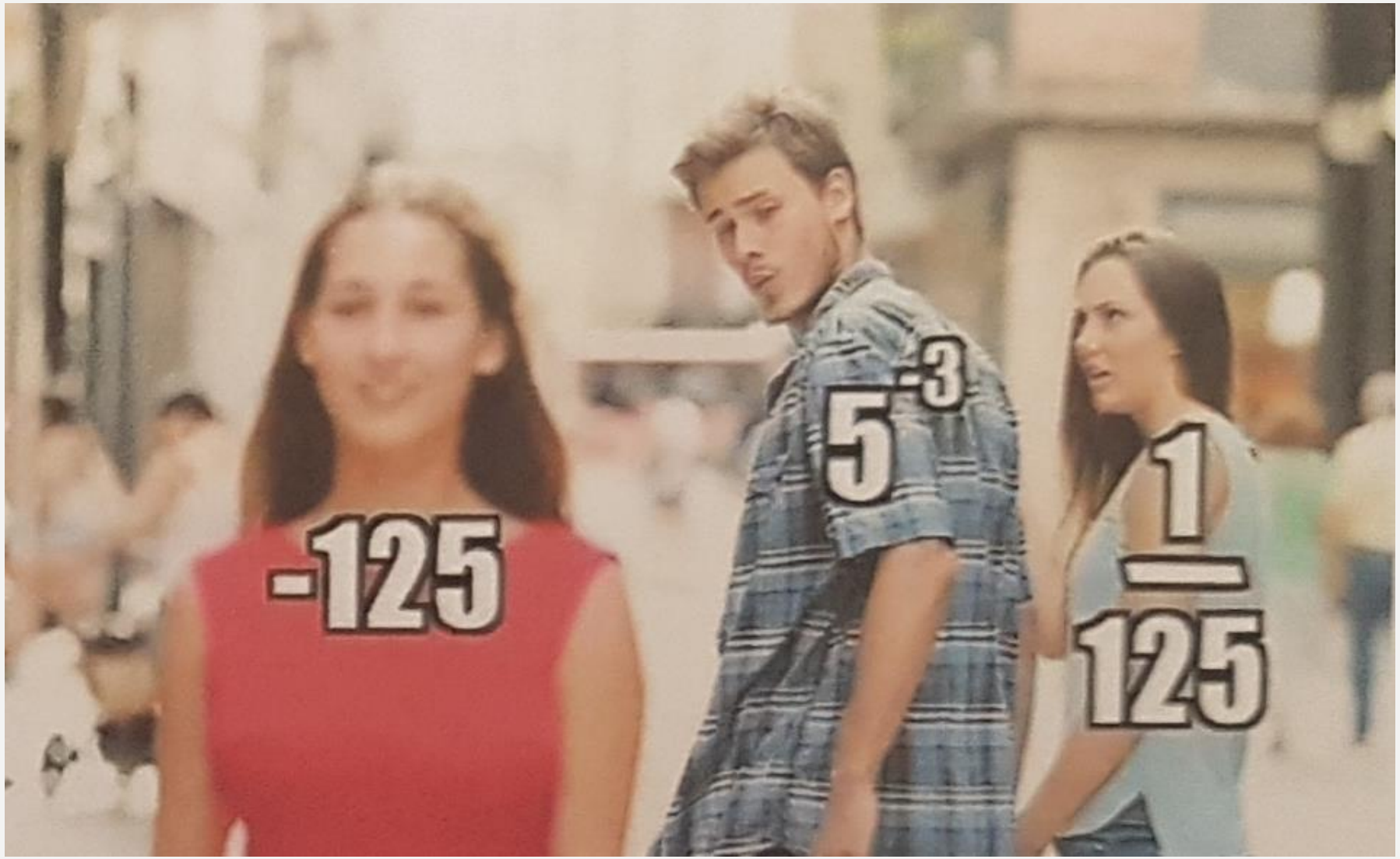

Solve
$x^2=9$
x=-3
x=3
Me
x=-3
x=3


*8th grade kid
finding √4
2
-2


At last! A meme about math that I can understand
2+2
2x2
2^2

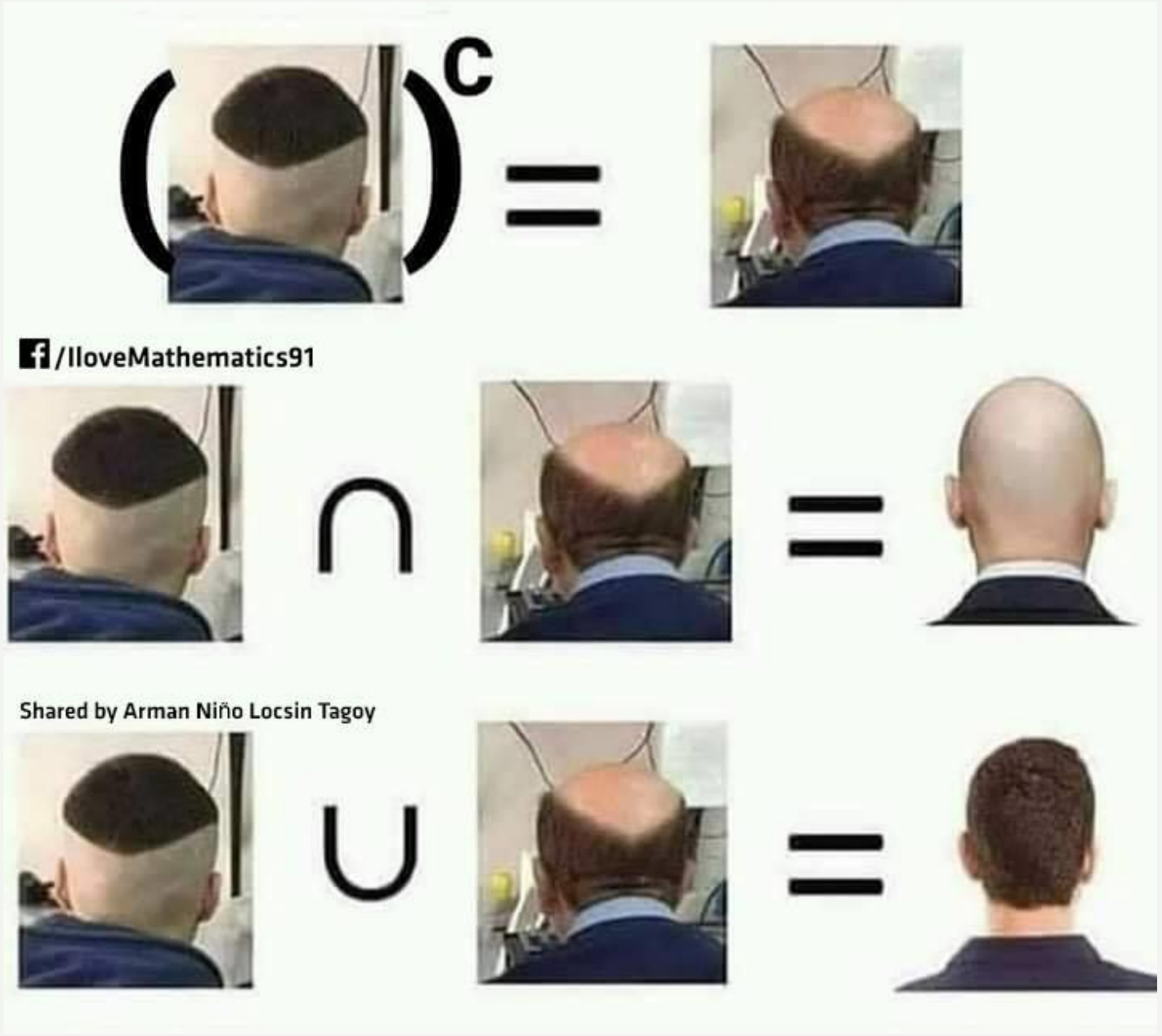

/IloveMathematics91
2x2
You're weak.
2+2
I'm you.


2/5
1/3 + 1/2
5/6


-125
5^{-3}
$\frac{1}{125}$

Using a calculator to make sure 4+3 equals 7 on a test

Me using $\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ to find roots of $x^2 - 1 = 0$.

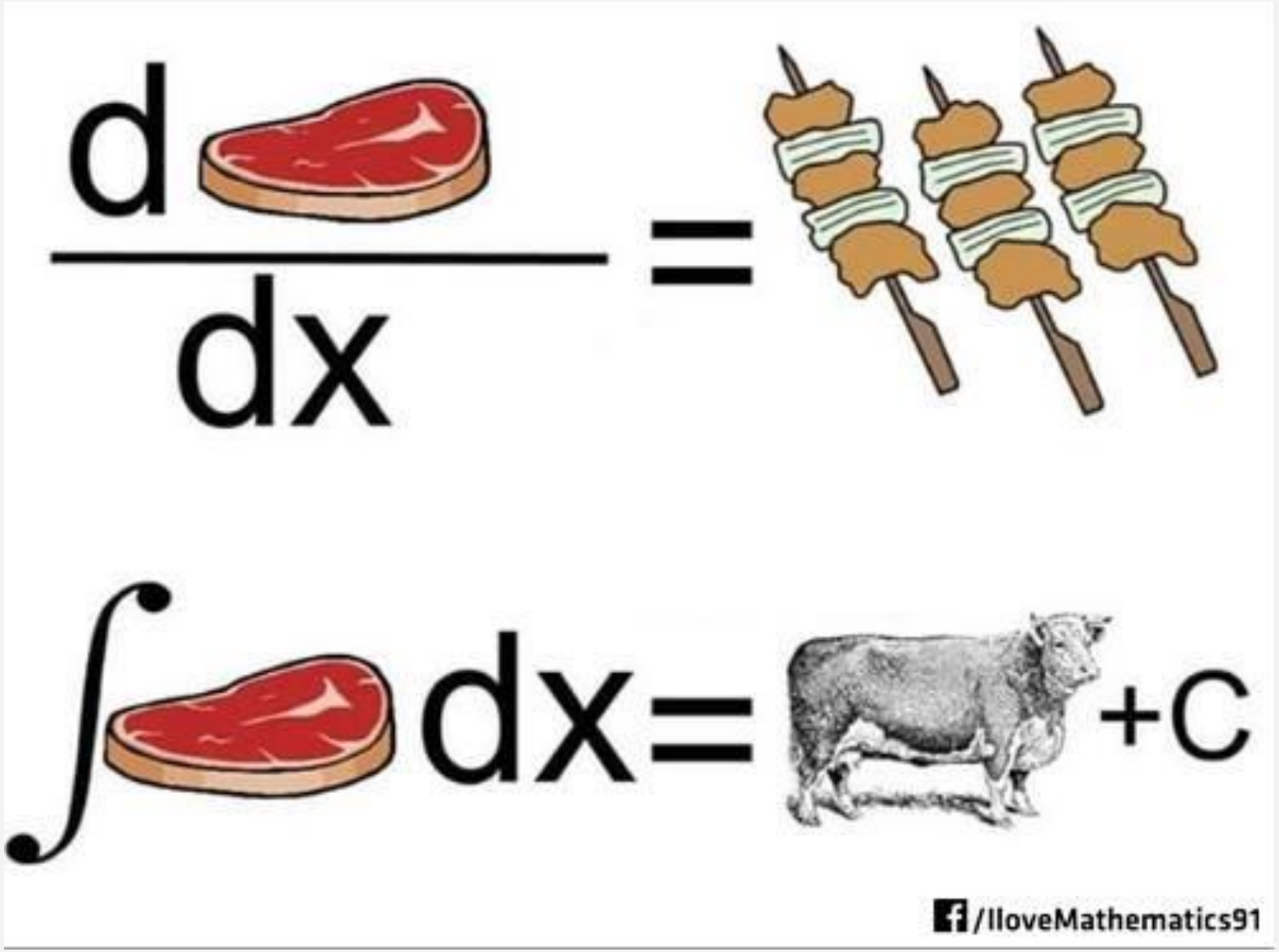

/IloveMathematics91
Shared by Arman Niño Locsin Tagoy

f(x)

g(x)

f(g(x))

g(f(x))


d
dx
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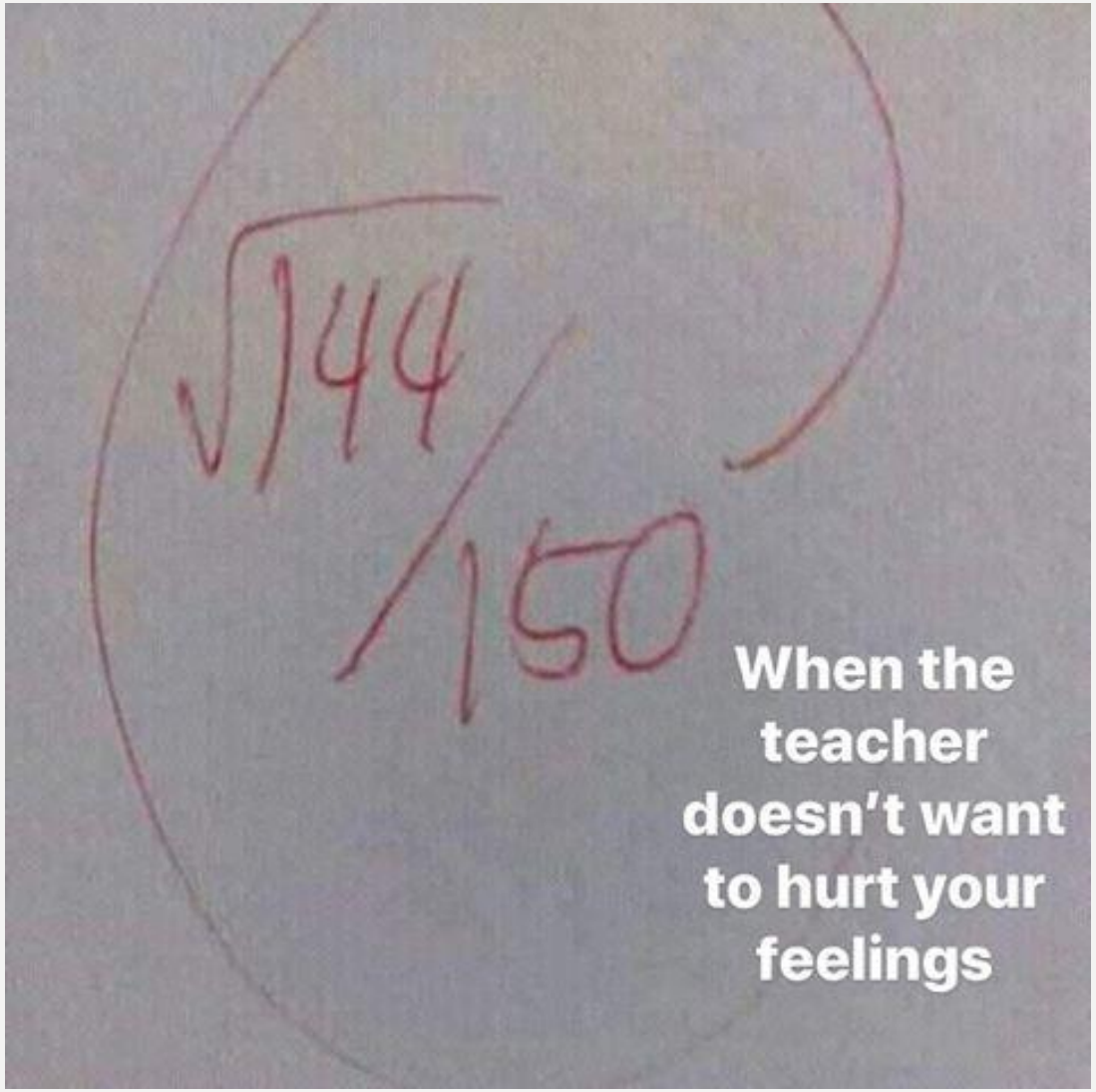
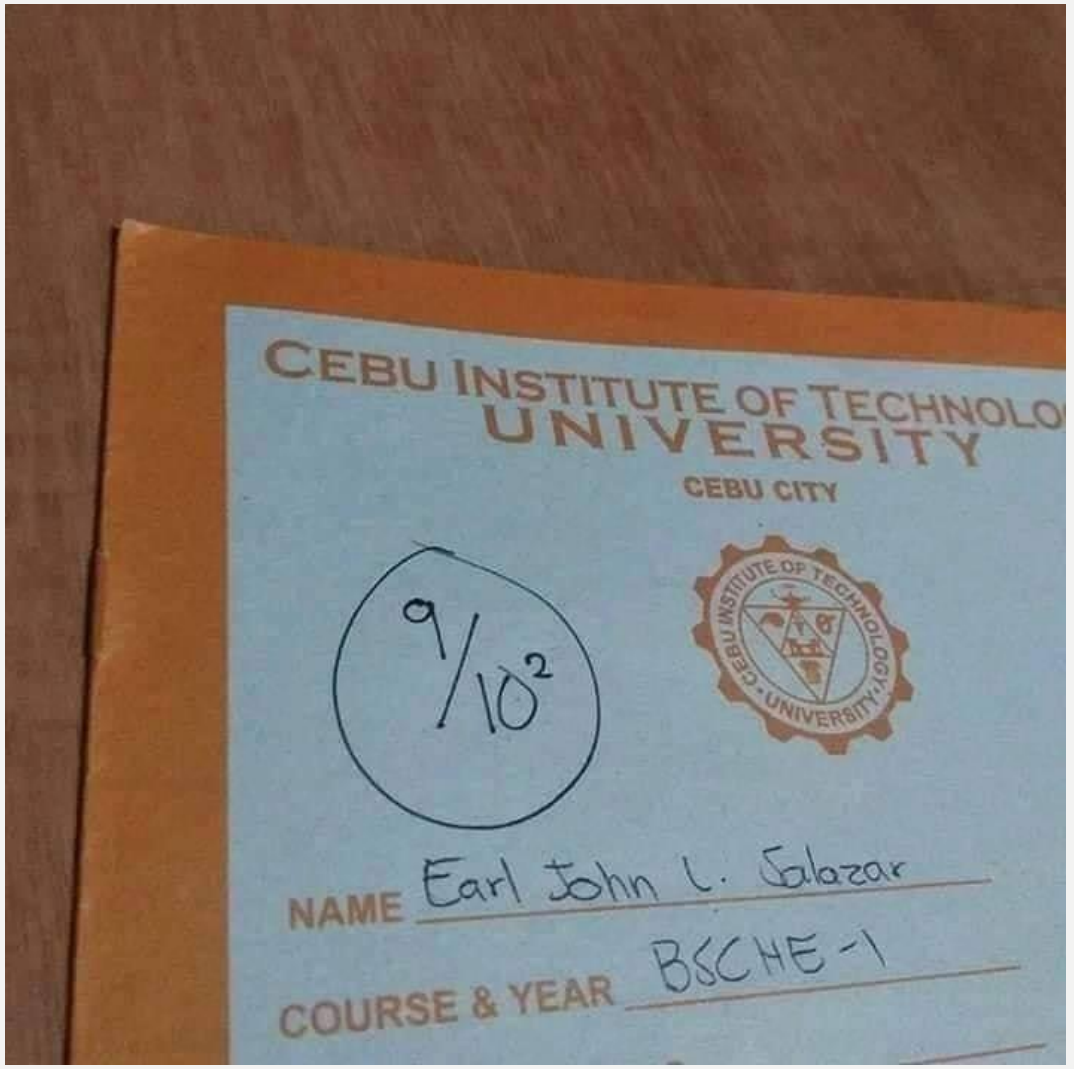
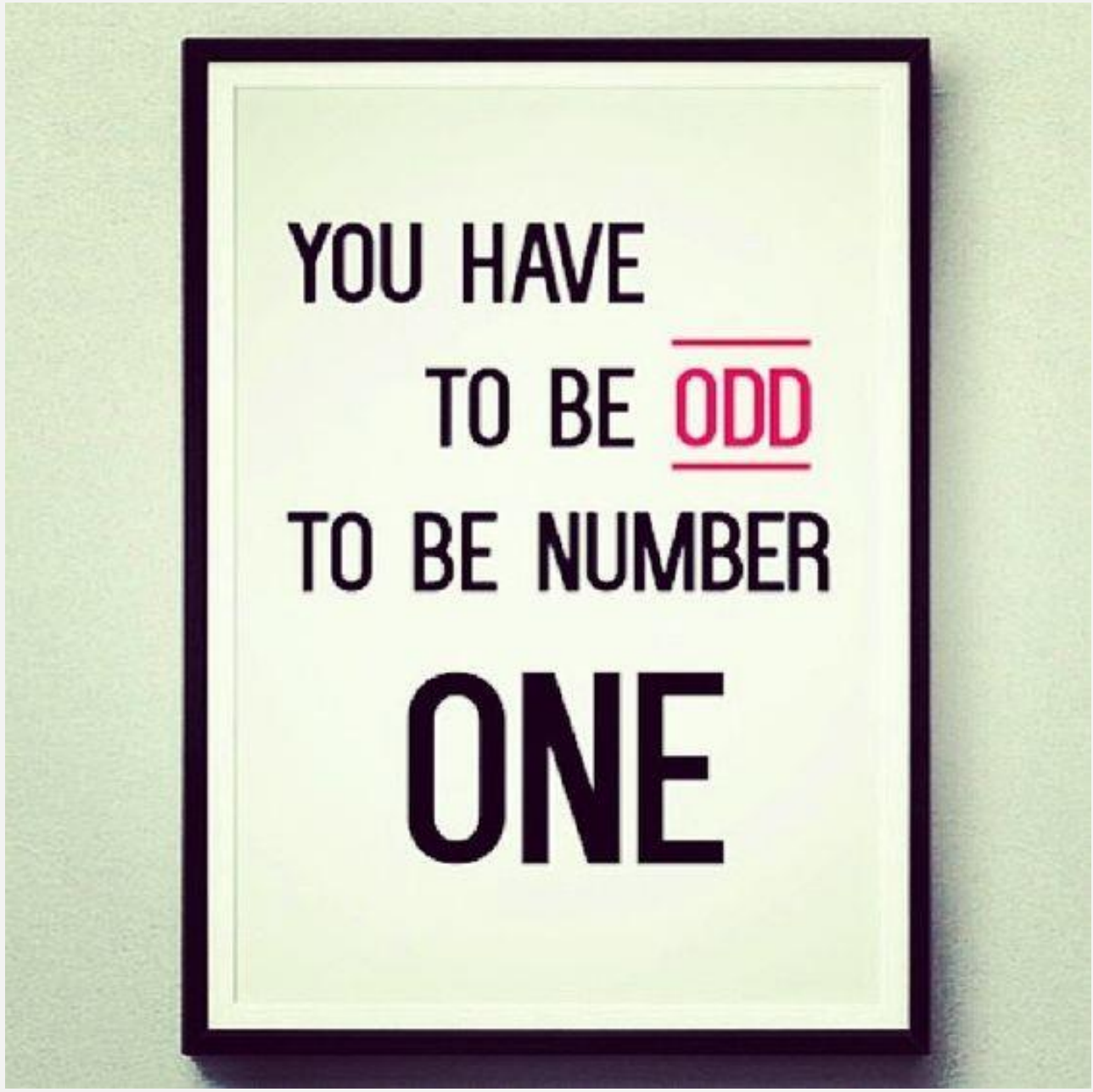
dx=
+C
/IloveMathematics91


√144/150
When the teacher doesn't want to hurt your feelings


CEBU INSTITUTE OF TECHNOLO
UNIVERSITY
CEBU CITY
9/10²
NAME Earl John L. Salazar
COURSE & YEAR BSCHE-1



Odd - dziwny

- liczba nieparzysta