Good morning: no warm up, we'll randomize and talk quadrilaterals

Reminders:
- retakes in DS today but not tomorrow
- assessment Monday
- engineering event in DS tomorrow...you should come!

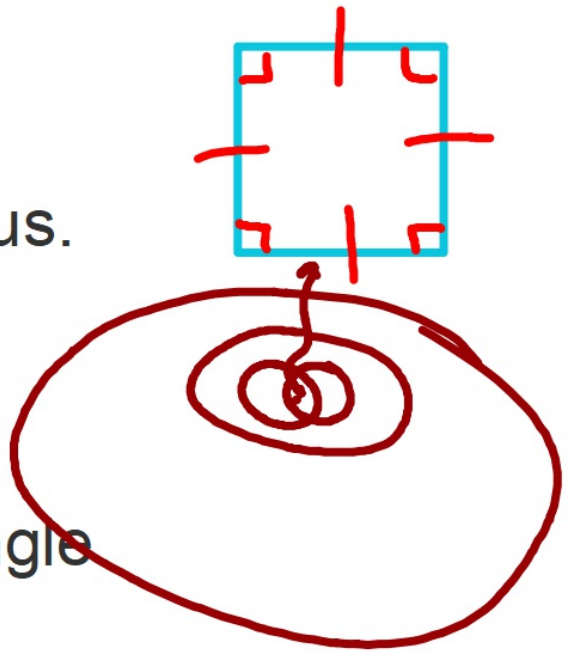
Discuss with your face partner whether each is true or false

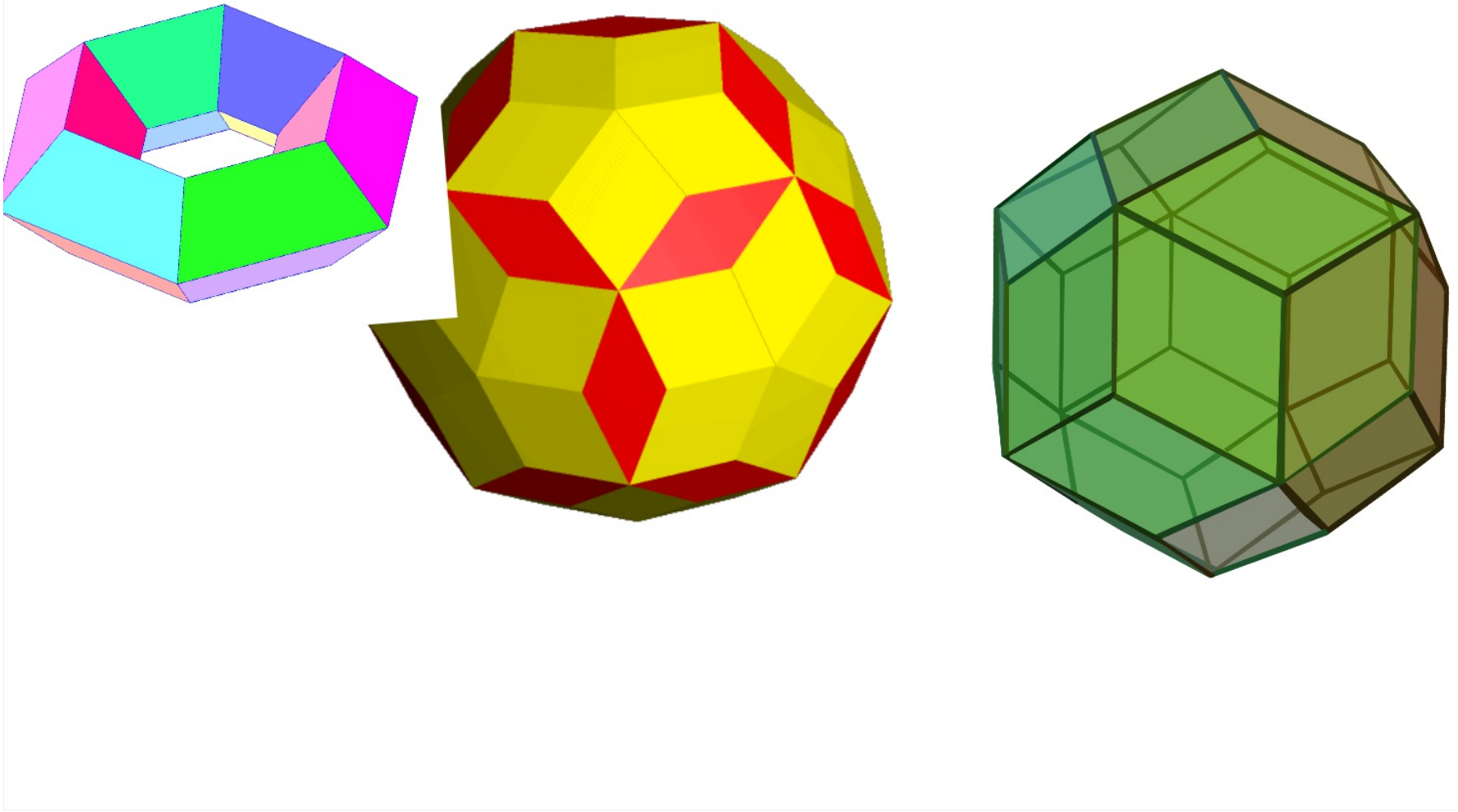
F 1. Squares are ~~never~~ always rectangles.

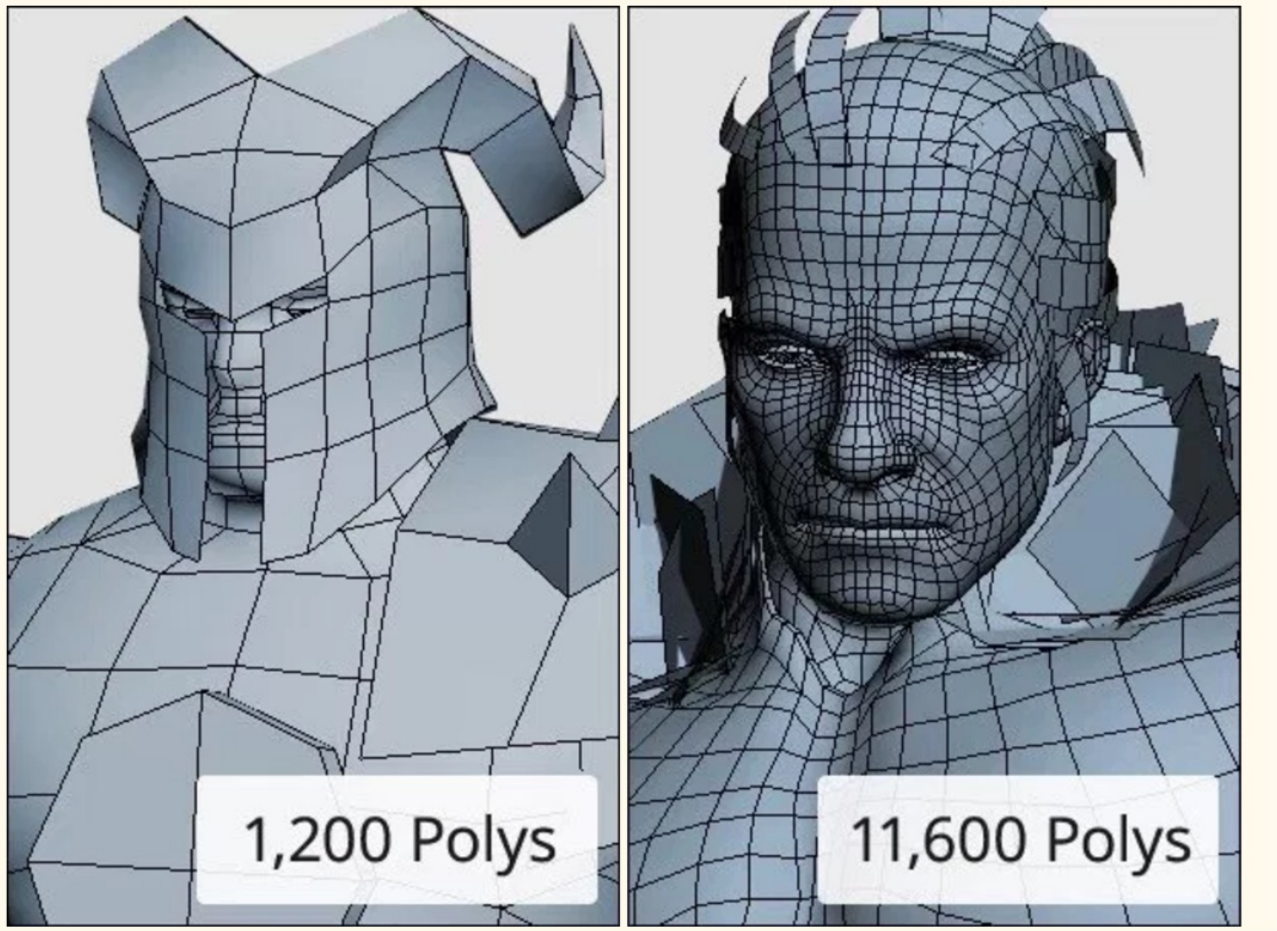
F 2. A rectangle cannot be a rhombus. F

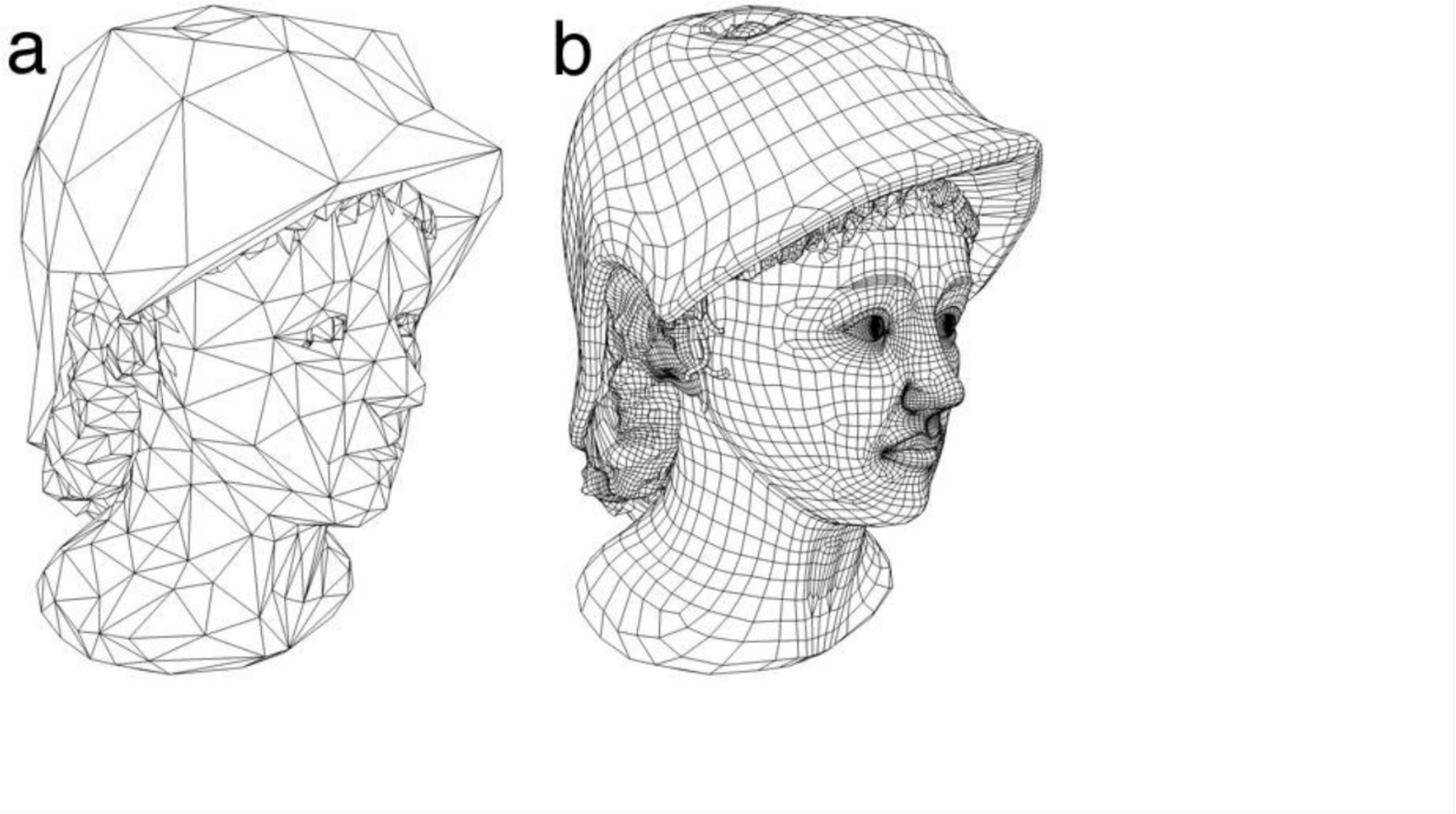
T 3. A rhombus can be a square. T

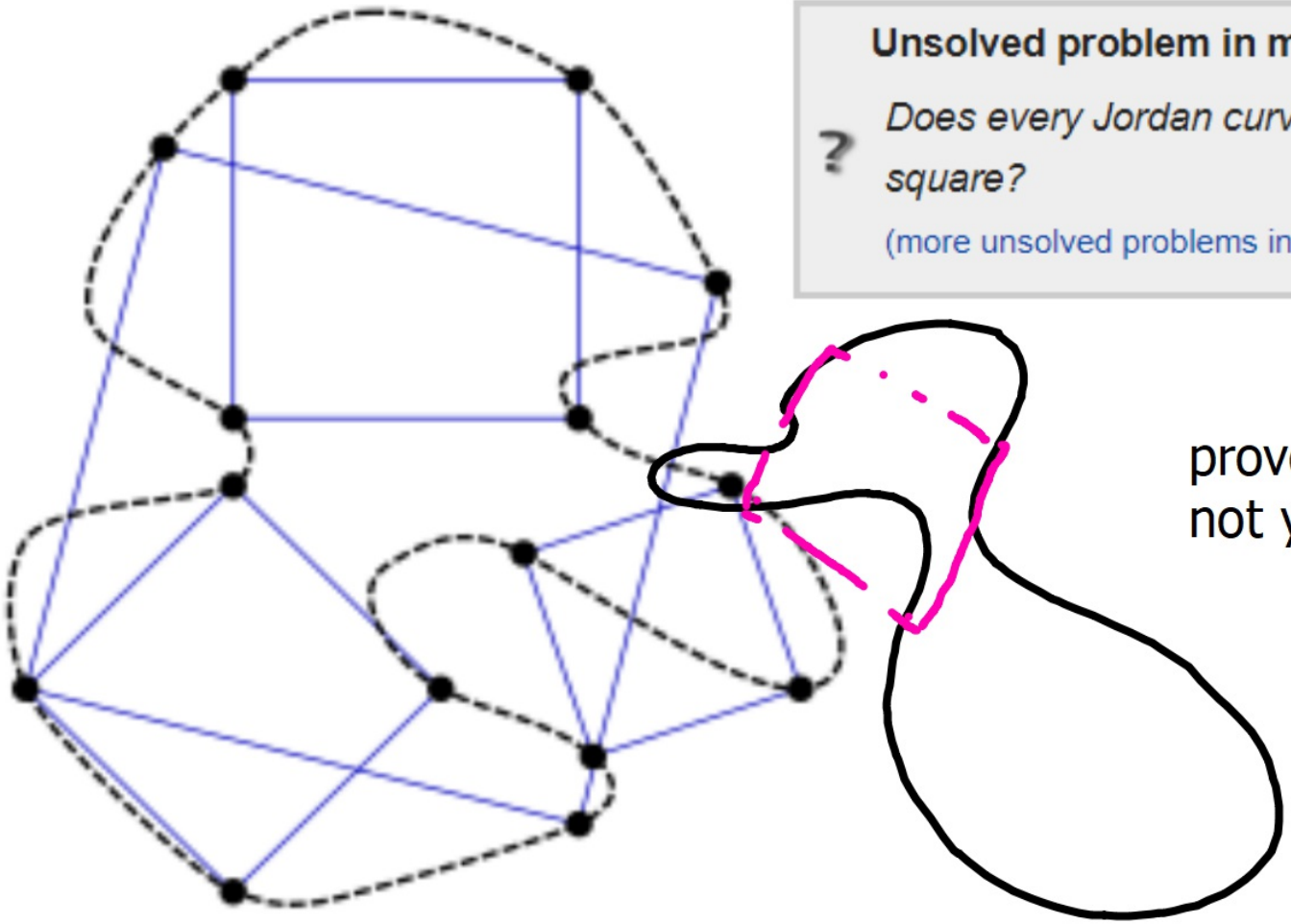
F 4. A square is ~~sometimes~~ always a rectangle






1,200 Polys
11,600 Polys


a
b



Unsolved problem in mathematics:

? *Does every Jordan curve have an inscribed square?*

(more unsolved problems in mathematics)

proven for rectangles!
not yet for squares...

Coordinate Quadrilaterals

The following 3 points are vertices of a rectangle.

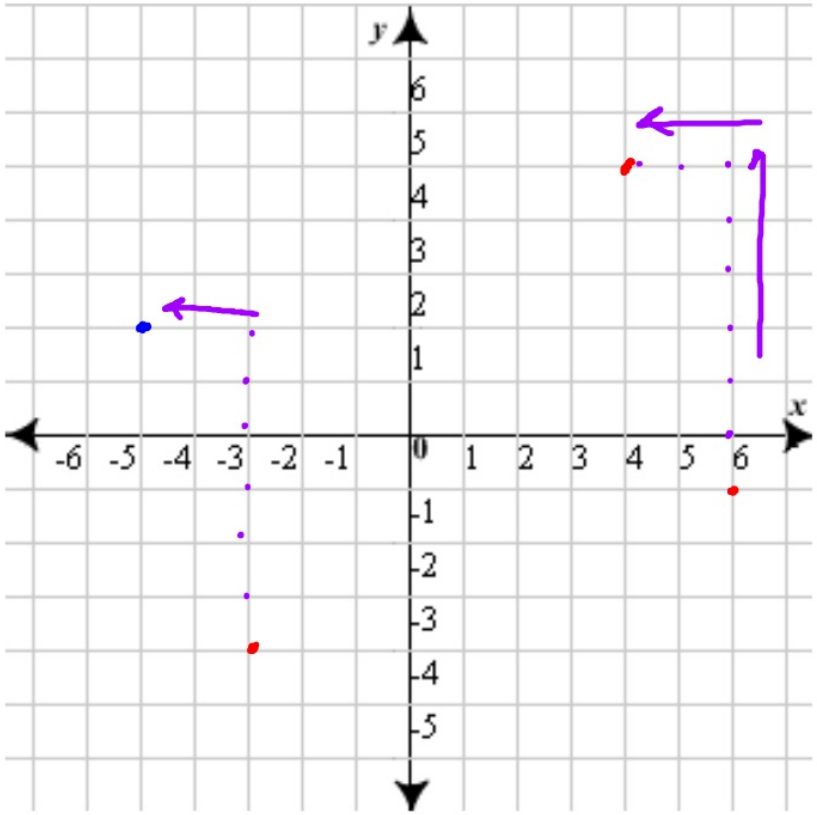
Find the 4th vertex's coordinates.

(4,5)

(-3,-4)

(6,-1)

(-5, 2)



Found an answer quickly?
Is that the only answer?
Explain why or why not! And if not, find any others

How to find the area of a coordinate plane figure

① make a circumscribing rect.

② Find its area
⇒ 99 u^2

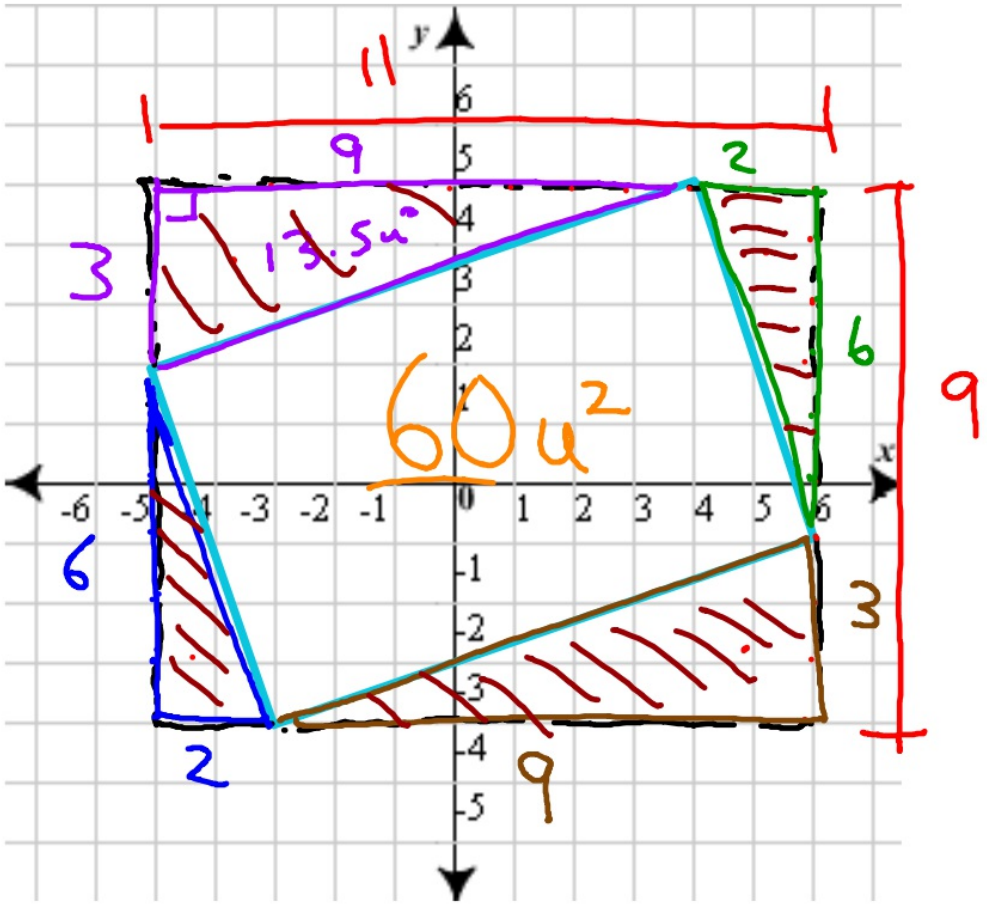
③ $A_\Delta = \frac{1}{2} \cdot b \cdot h = \frac{1}{2} \cdot 3 \cdot 9$
$= 13.5$

$A_\Delta = 6$

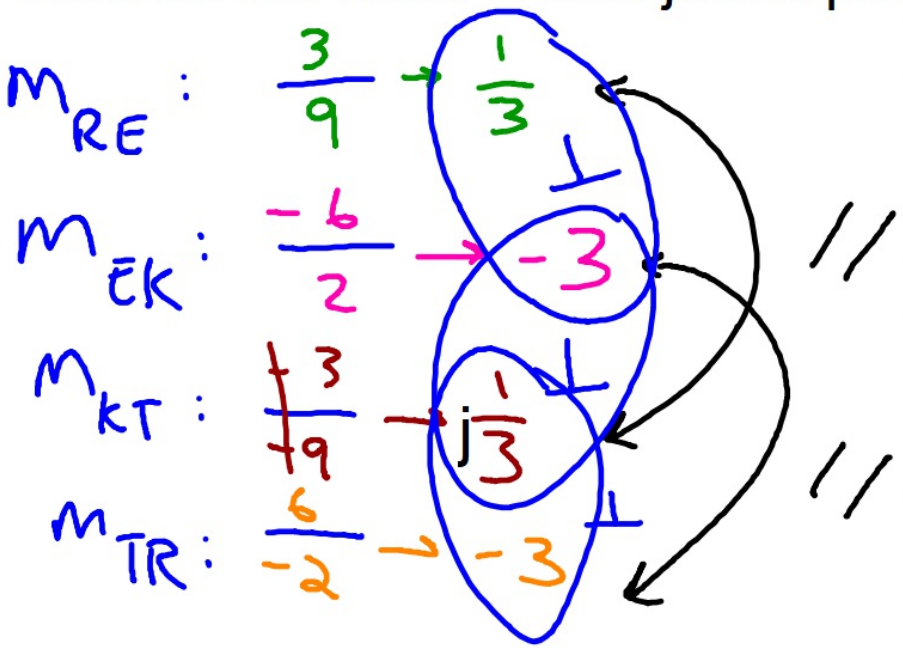
$A_\Delta = 6$

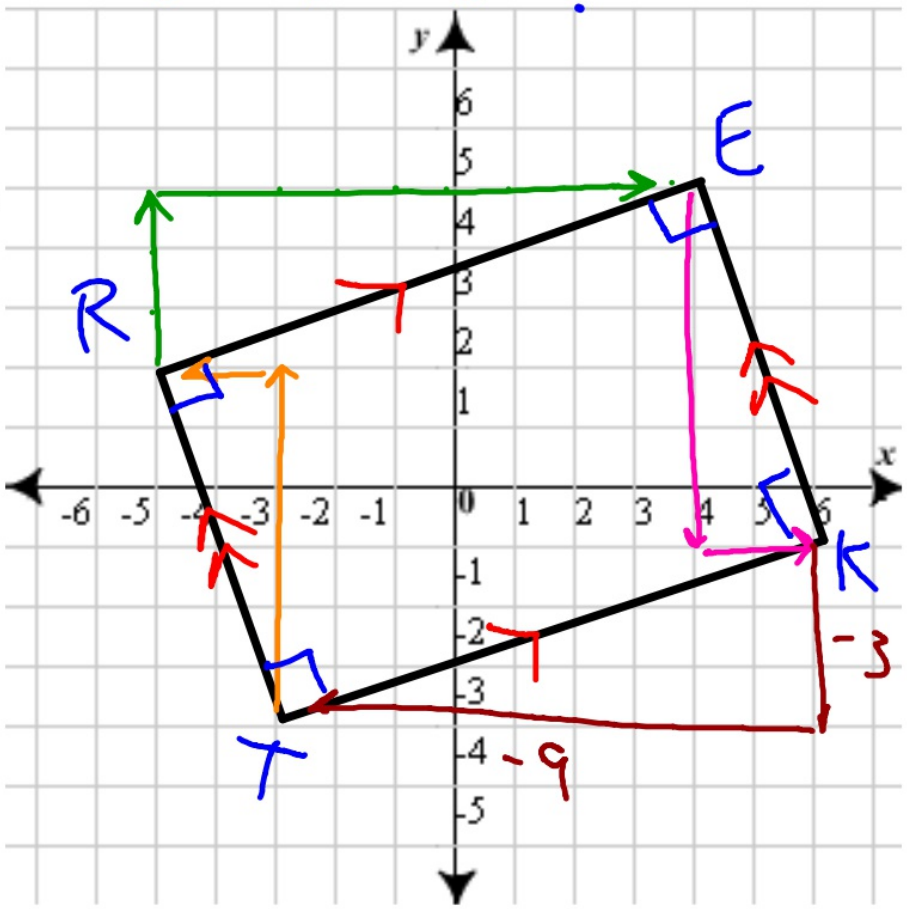
$A_\Delta = 13.5$

39 u^2



How can you prove that this shape is really a rectangle??
How do we know it isn't just a parallelogram putting on airs??

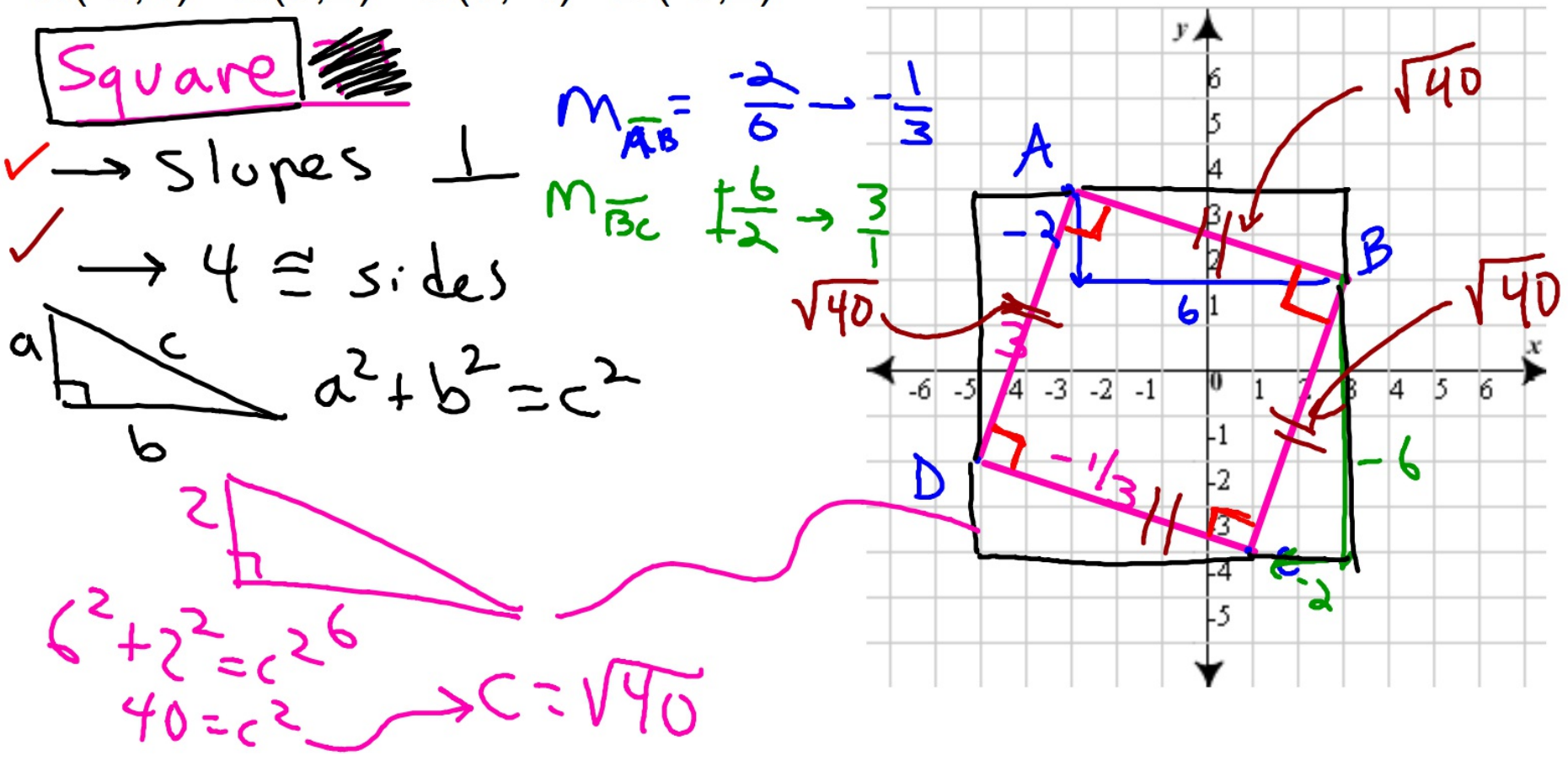




use slopes for parallels
and perpendiculars

Model Problem

Find the most specific name for the quadrilateral formed by
A(-3,4) B(3,2) C(1,-4) D(-5,-2)



More Practice with Quadrilaterals

look at last night's video notes for help
answer key posted to eLab door

What skills are on Monday's assessment

CO-C11a: Parallelograms
CO-C11b: Rectangles/Rhombi/Squares

CO-B7: Congruent Triangles
CO-B8: Recognizing Criteria
CO-A4: Transformation Mechanics

(the coordinate plane stuff we learned today will be on the next (last Q2) assessment)

HW
"practice assessment"
p215: # 9, 11, 12
p 220: #18, 20, 21

solutions will be posted to mgeo.weebly.com