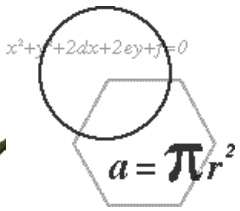
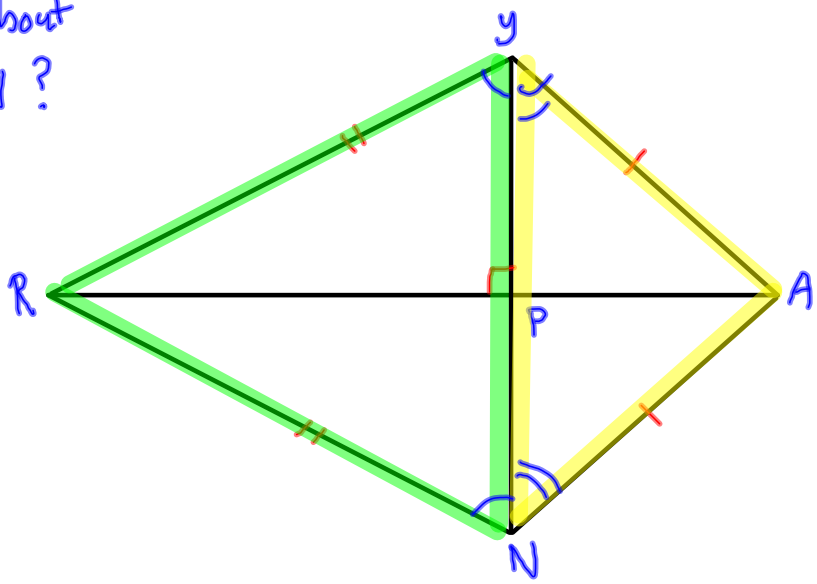
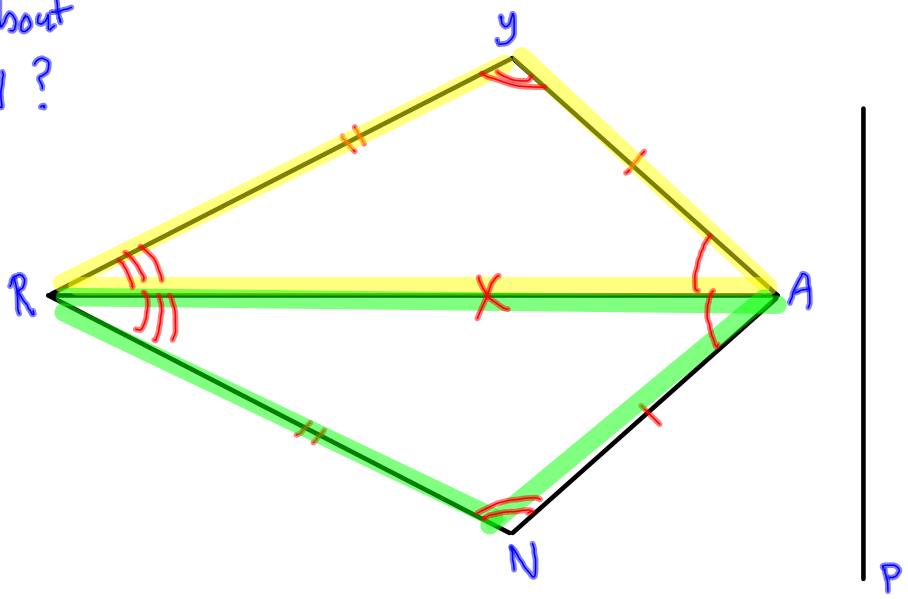


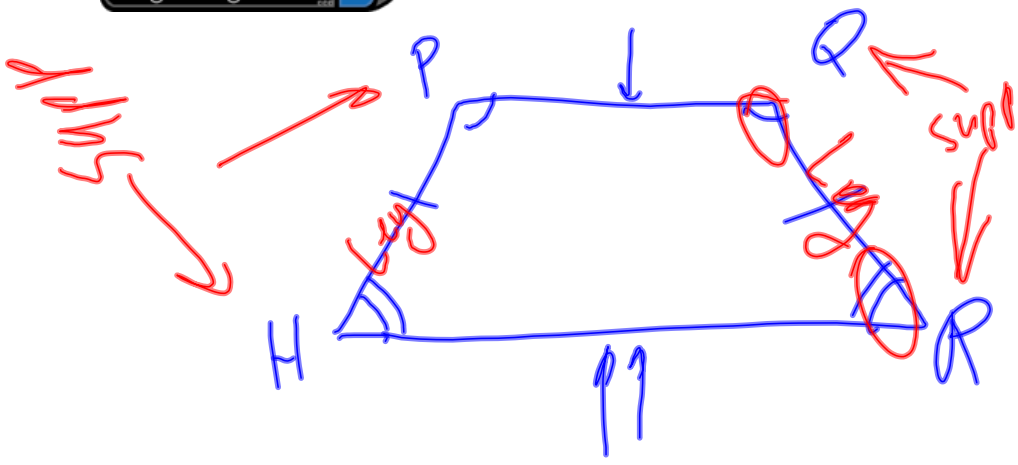
Good Morning!

What can you tell me about kite RYAN ?



What can you tell me about kite RYAN ?





$y = 6x$

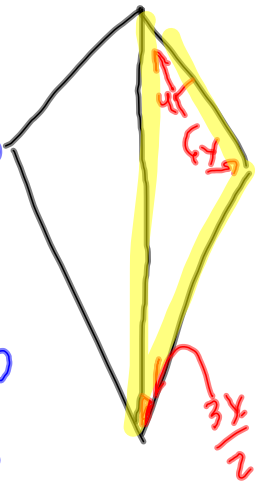
$2 \cdot 6x + 45 + \frac{3x}{2} = 180$

$12x + 90 + 3x = 360$

$15x = 270$

$x = 18$

$y = 6x = 6 \cdot 18 = 108$



Do the investigation on page 326 of your book...

On an xy coord sys draw a square aligned as follows.

Divide & conquer...1 person at ea table take 1 of following:

- on 1 axis
- on both axes
- off but parallel to both axes
- not parallel to either axis

Determine:

- slope each side and diagonal
- coords of midpoints each diagonal

Do the investigation on page 326 of your book...

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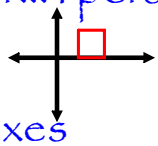

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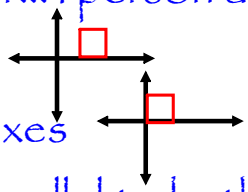

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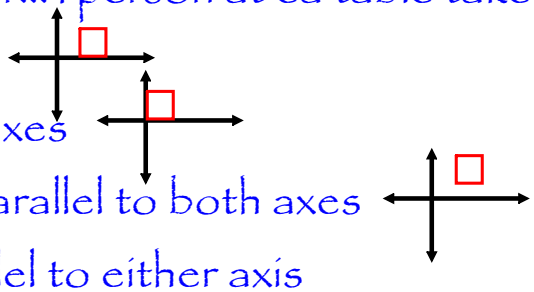

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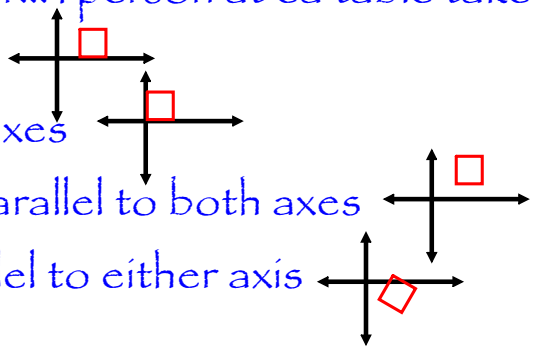

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- not parallel to either axis

Determine:

- slope each side and diagonal $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{ryse}}{\text{run}}$
- coords of midpoints each diagonal

Do the investigation on page 326 of your book...

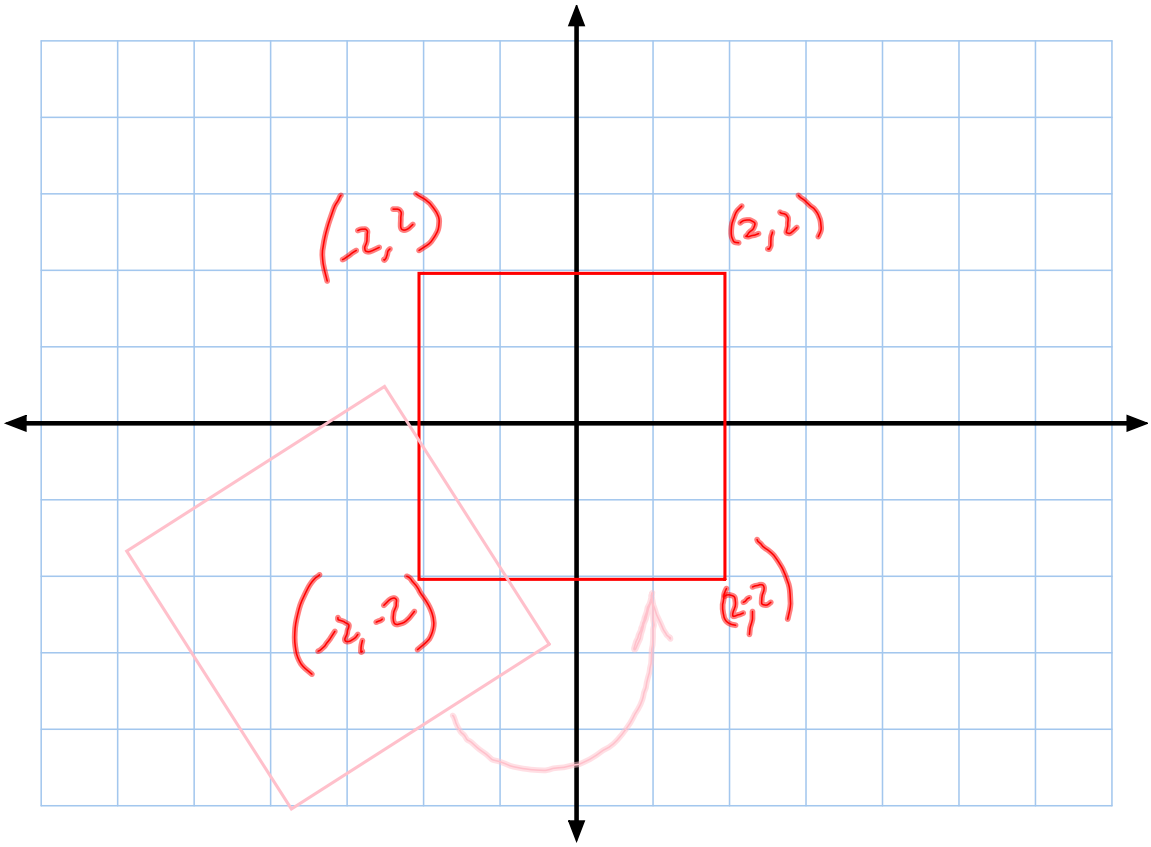
On an xy coord sys draw a square aligned as follows.

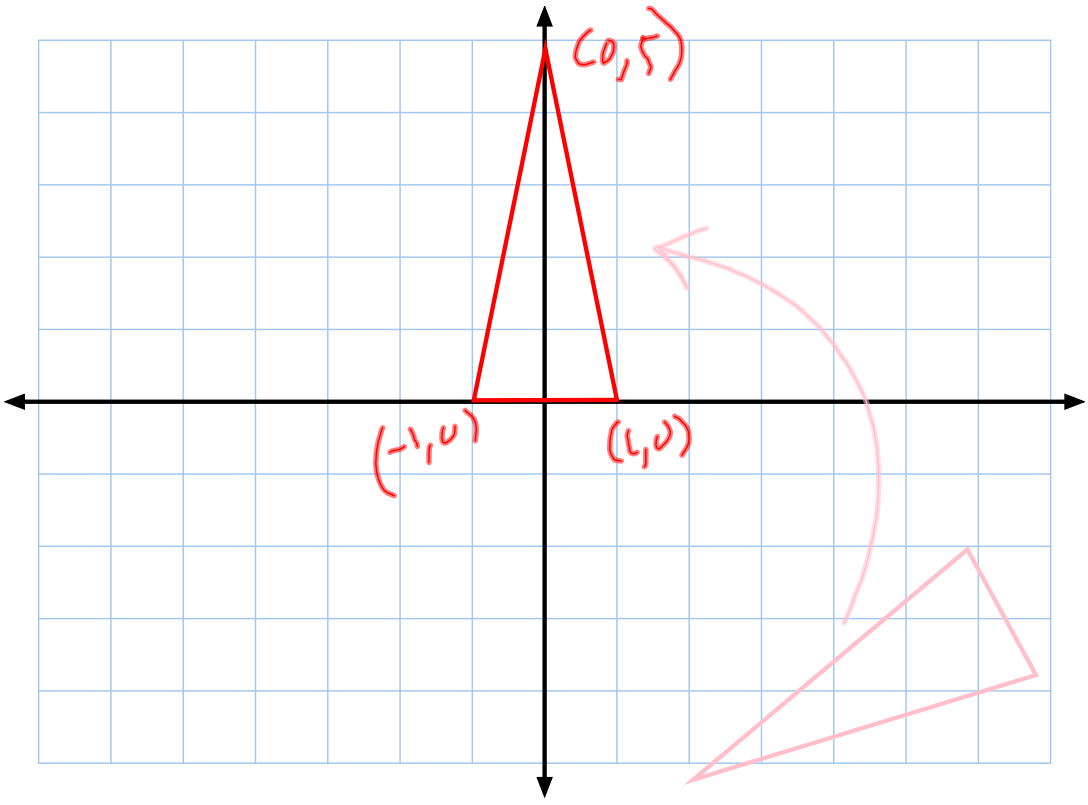
Divide & conquer...1 person at ea table take 1 of following:

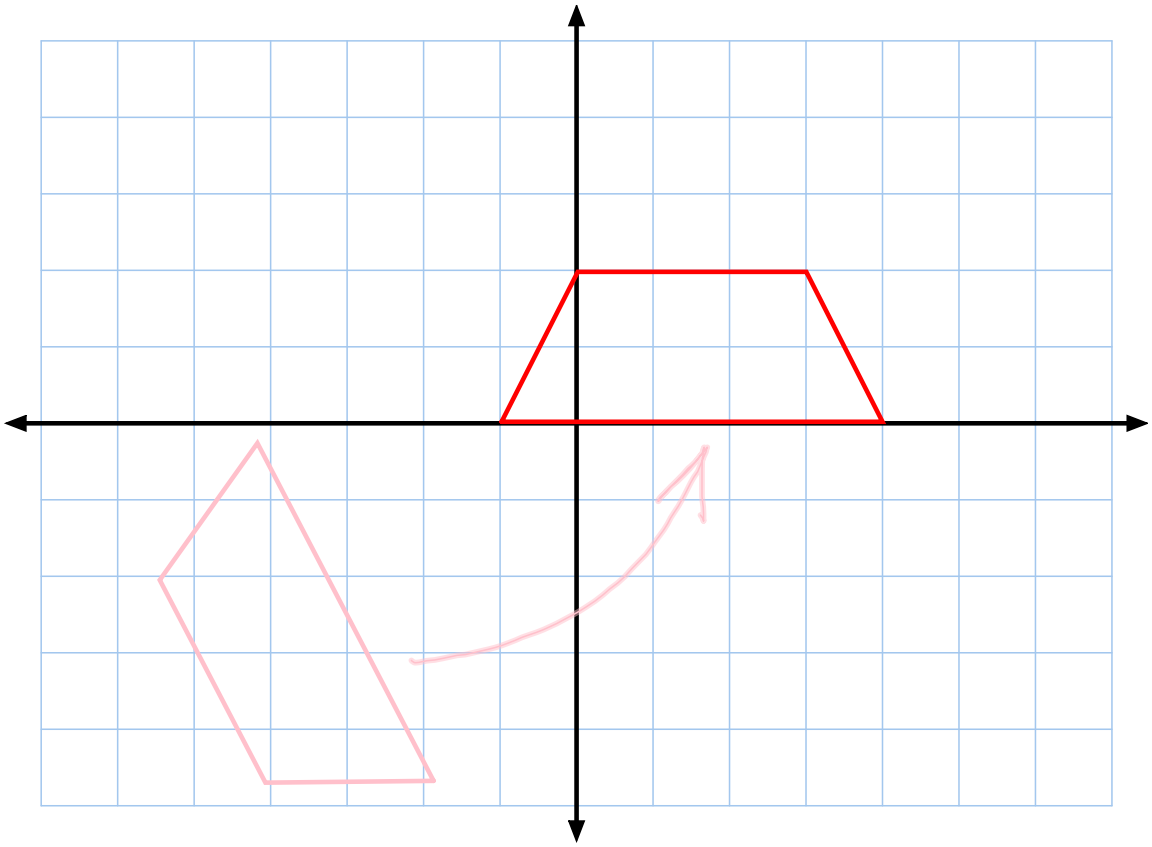
- on 1 axis
- on both axes
- off but parallel to both axes
- not parallel to either axis

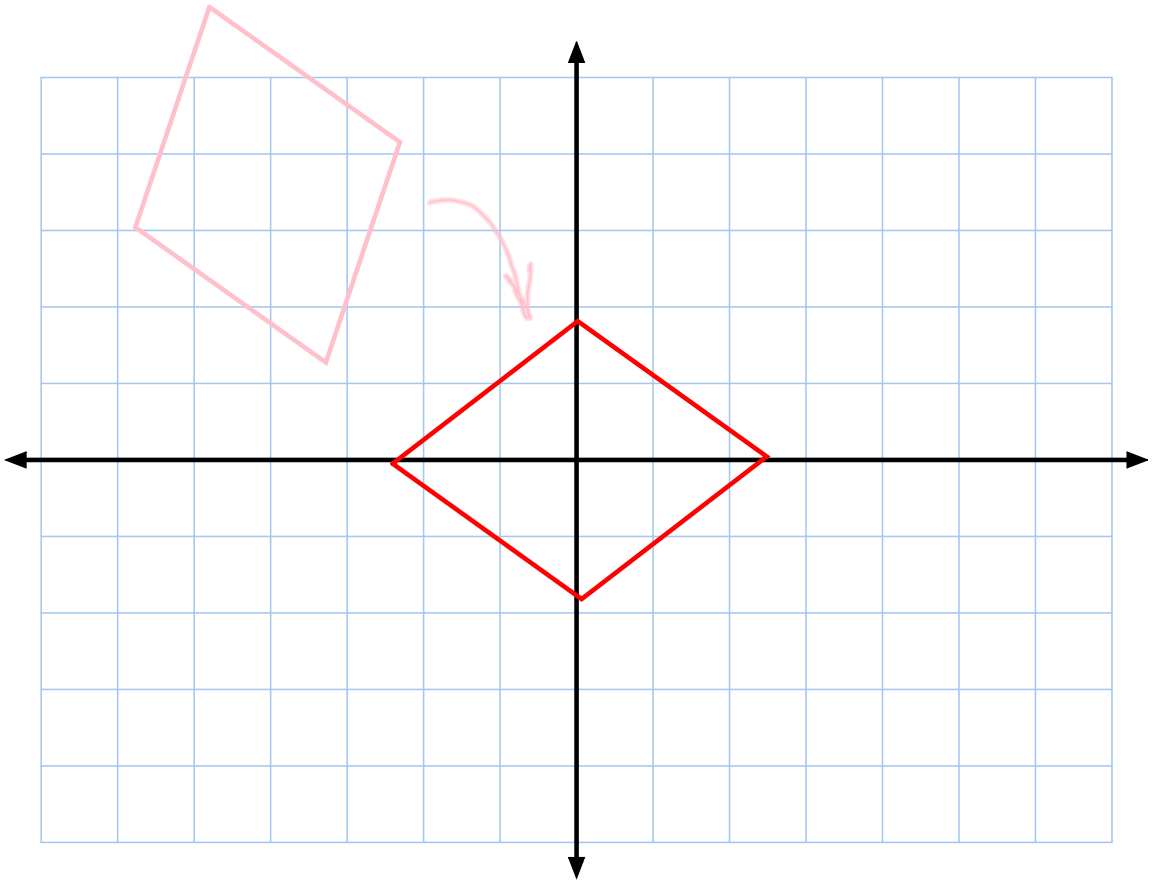
Determine:

- slope each side and diagonal $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{ryse}}{\text{run}}$
- coords of midpoints each diagonal $MP = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$

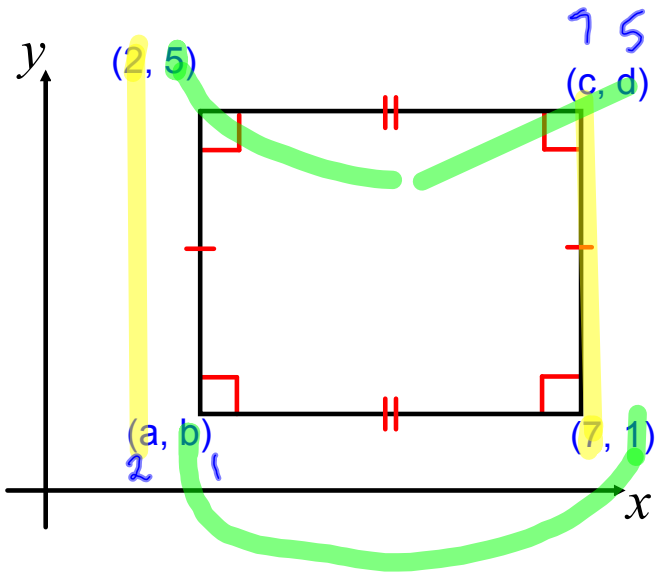

(-2, 2)
(2, 2)
(-2, -2)
(2, -2)


(0, 5)
(-1, 0)
(1, 0)





Find the value of a, b, c & d

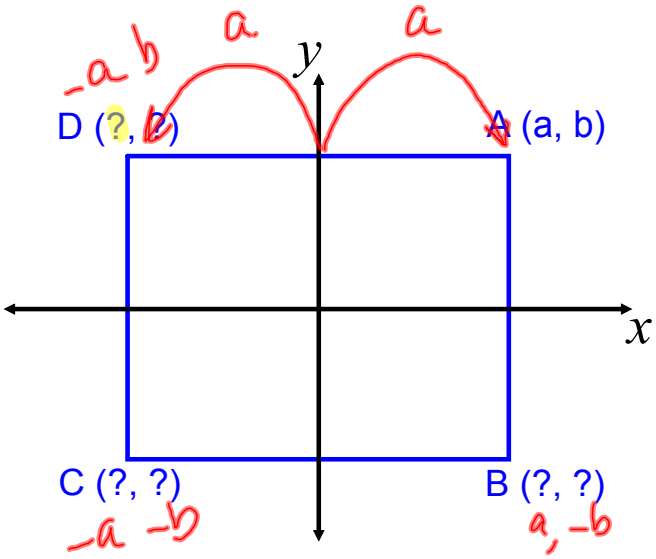


Find the missing values

Rectangle

Centered @ origin

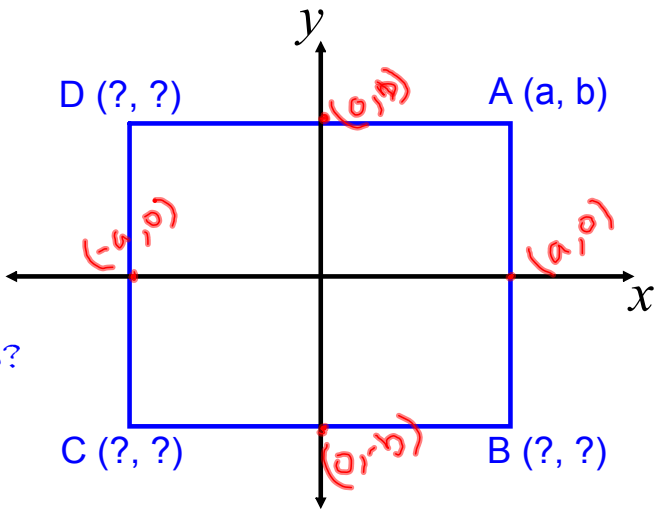
Sides ∥ axes



Find the missing values

Rectangle
Centered @ origin
Sides ∥ axes

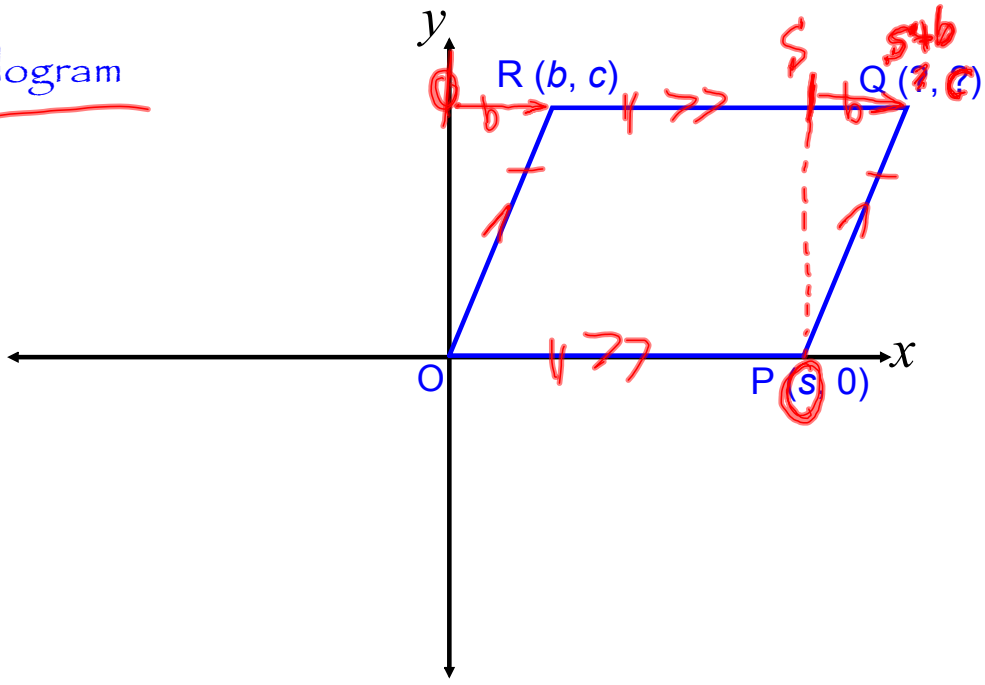
What are the midpts?



Caitlin

Find the coords of Q (in terms of b, c, & s)

Parallelogram



Advantage of using coords multiples of 2

Given: A(2a, 2b) & B(2c, 2d)

1) What is the midpoint of $\overline{AB}$?

$\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$ $\left(\frac{2a+2c}{2}, \frac{2b+2d}{2}\right)$ $(a+c, b+d)$

Zachary

2) What is the slope of $\overline{AB}$?

$\frac{y_2-y_1}{x_2-x_1}$ $\frac{2b-2d}{2a-2c} = \frac{b-d}{a-c}$

Jonathan

3) What is $\overline{AB}$?

$\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

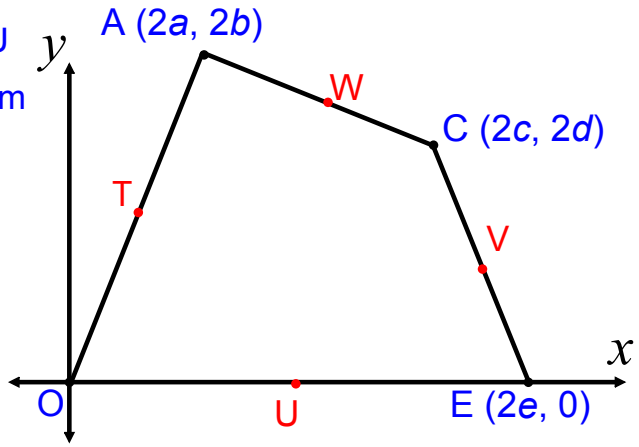
$\sqrt{(2c-2a)^2+(2d-2b)^2}$

Parker

Putting coords that are multiples of 2 to work...

Given: Quad ACEO, midpts T,W,V,U

Prove: Quad TWVU is a parallelogram



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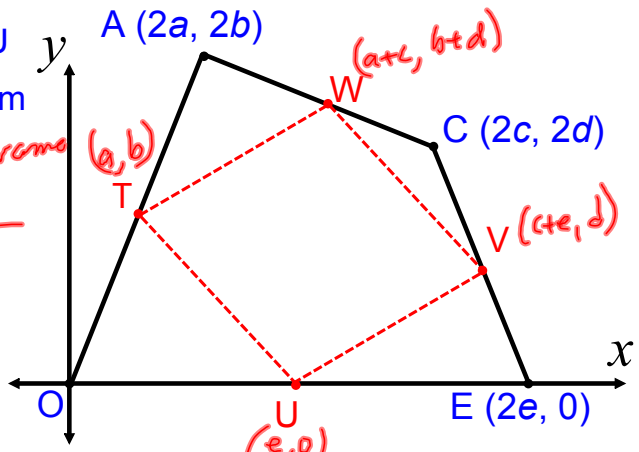


use slope to show its a parallelogram

show $\overline{TW} \parallel \overline{UV}$ and $\overline{TU} \parallel \overline{WV}$

$m_{TW} = \frac{(a+c)-a}{(b+d)-b} = \frac{c}{d}$

$m_{UV} = \frac{(c+e)-e}{d-0} = \frac{c}{d}$

so $m_{TW} = m_{UV}$, so $\overline{TW} \parallel \overline{UV}$

$m_{TU} = \frac{b-0}{a-e} = \frac{b}{a-e}$

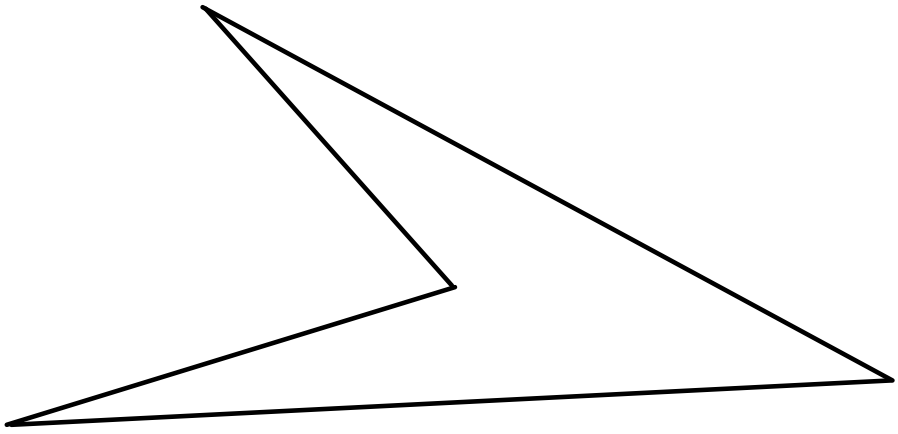
$m_{WV} = \frac{(b+d)-d}{(a+c)-(c+e)} = \frac{b+d-d}{a+c-c-e} = \frac{b}{a-e}$

$m_{TU} = m_{WV}$, so $\overline{TU} \parallel \overline{WV}$

∴ TWVU is a parallelogram

Q.E.D.!

Will it work for a concave quad?



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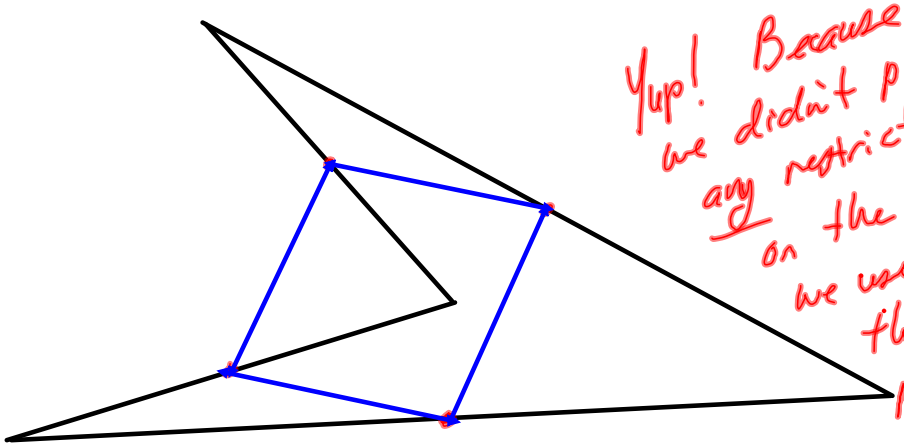

Yup! Because we didn't place any restrictions on the quad we used in the proof ... it works for all quads!

L6-6 HW Problems

L6-6 Pg 328 #1-12, 20-25, 28-31, 35-41

Extra credit worksheet (available online)