Use coordinate geometry to determine the most precise name for quadrilateral ABCD

A(0,7) B(4, 5) C(3,-2) D(-2,3)

midpoint of diagonals:

AC: $\left(\frac{0+3}{2}, \frac{7+-2}{2}\right) = \left(\frac{3}{2}, \frac{5}{2}\right)$

BD: $\left(\frac{4+-2}{2}, \frac{5+3}{2}\right) = \left(\frac{2}{2}, \frac{8}{2}\right) = (1,4)$

Diagonals do not bisect each other ∴ NOT a ||-gram

Use coordinate geometry to determine the most precise name for quadrilateral ABCD

A(0,7) B(4, 5) C(3,-2) D(-2,3)

Slope

AB $m = \frac{2}{-4} = -\frac{1}{2}$

BC $m = \frac{7}{1} = 7$

CD $m = \frac{5}{-5} = -1$

DA $m = \frac{4}{2} = 2$

NO ||-sides

∴ NOT A TRAPEZOID

distance

AB $= \sqrt{(-4)^2+2^2} = \sqrt{20}$

BC $= \sqrt{1^2+7^2} = \sqrt{50}$

CD $= \sqrt{(-5)^2+5^2} = \sqrt{50}$

DA $= \sqrt{2^2+4^2} = \sqrt{20}$

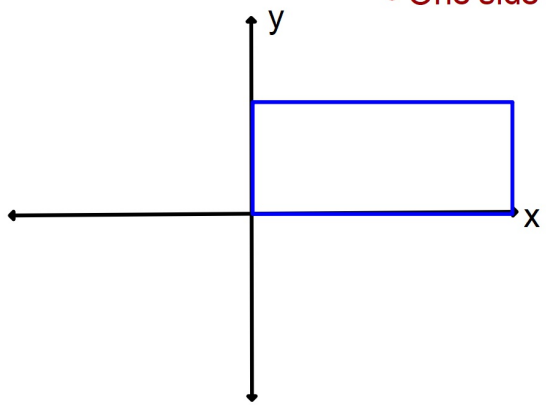
2 pair of adjacent sides ≅ & no opp sides ≅.

∴ ABCD is a kite

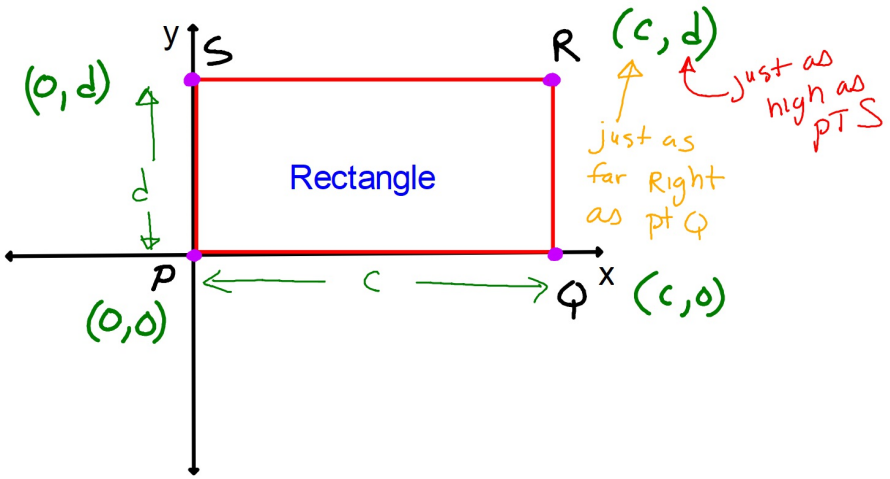
Section 6-6: Placing Figures in the Coordinate Plane.

Placing a figure on the coordinate plane in Standard Position

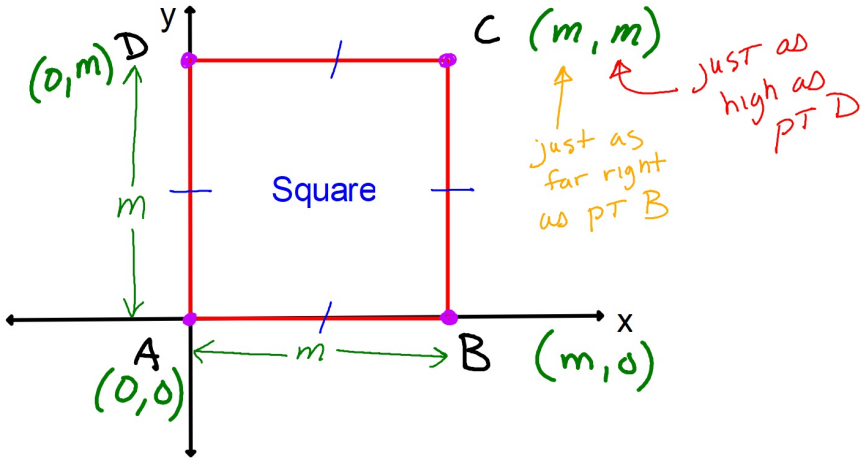
- One vertex is at the origin
- One side is on the pos x-axis



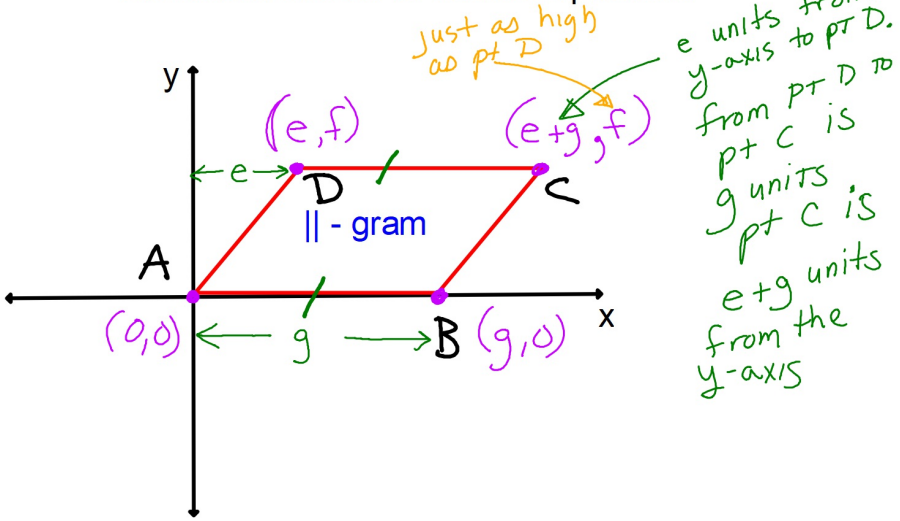
Now label the coordinates of the vertices using the fewest number of variables possible.



Now label the coordinates of the vertices using the fewest number of variables possible.



Now label the coordinates of the vertices using the fewest number of variables possible.



Hwk #8

Sec 6-6

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