* Geometry, Algebra 1, Algebra 2

Precalc 10.1

Find the distance between 2 points on the coordinate plane*
Find the midpoint of 2 points*
Use analytical methods to prove geometric relationships

distance
midpoint
analytic geometry
proof (CSI)

PT = dist.

equidistant each end

Find the distance between each pair of points with the given coordinates. Then, find the coordinates of the midpoint of the segment that has endpoints at the given coordinates.

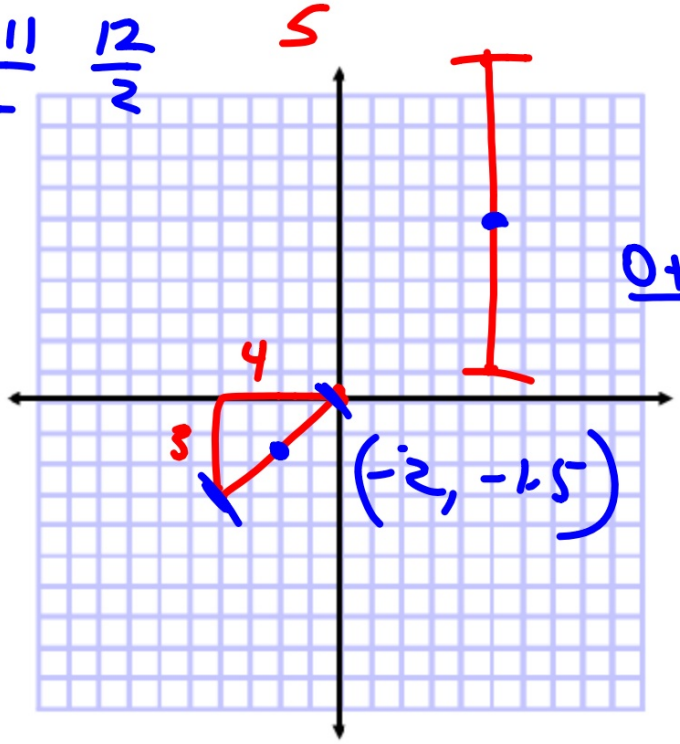
5. (5, 1), (5, 11)

6. (0, 0), (−4, −3)

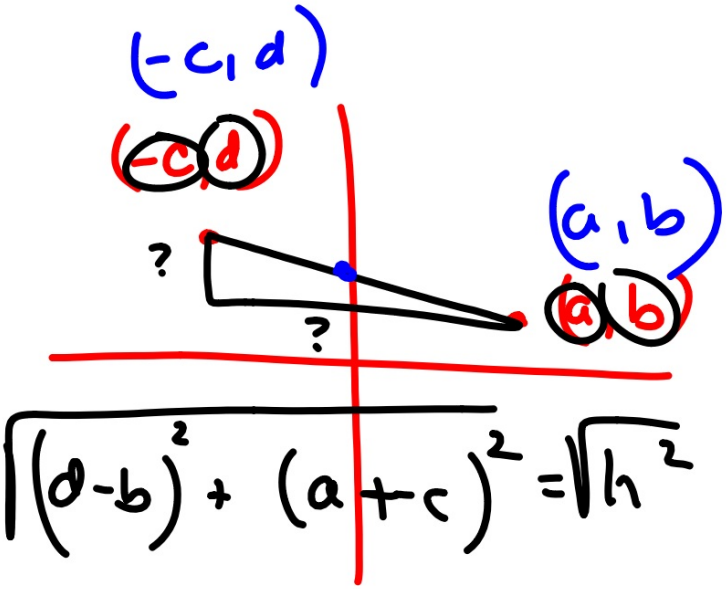
7. (−2, 2), (0, 4)

10 $\frac{1+11}{2}$ $\frac{12}{2}$

(5,6)



$\frac{0+-4}{2}$ $\frac{0+3}{2}$



$$\left(\frac{-c+a}{2}, \frac{d+b}{2}\right)$$

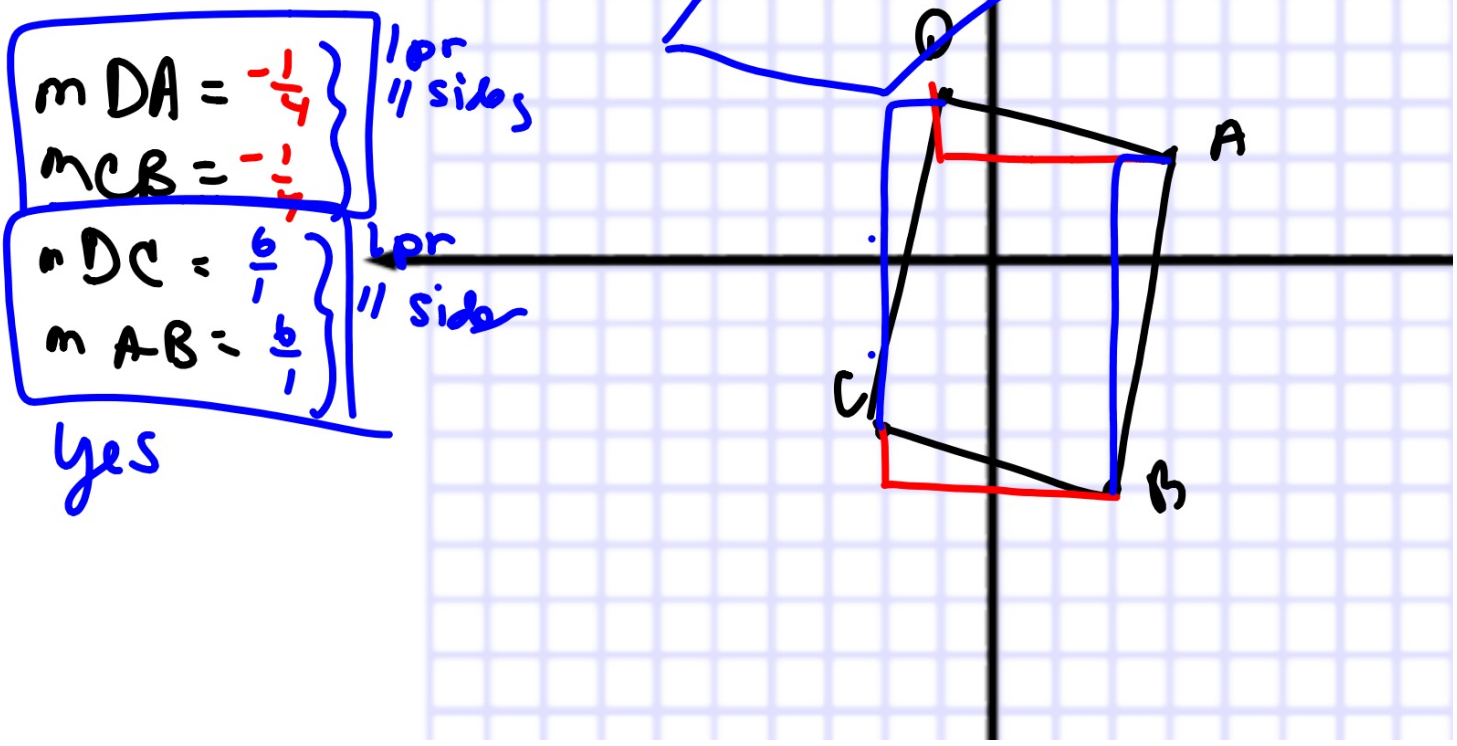
$$\sqrt{(d-b)^2 + (a+c)^2} = \sqrt{h^2}$$

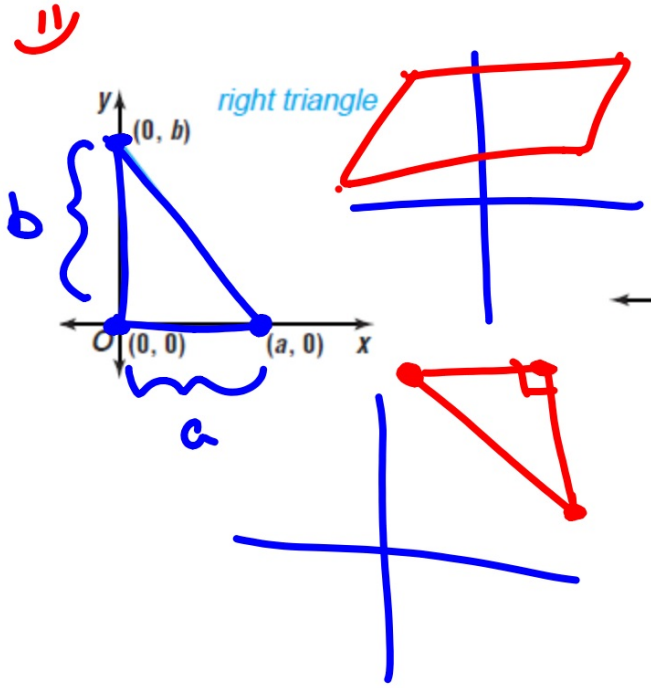
Ex. 3

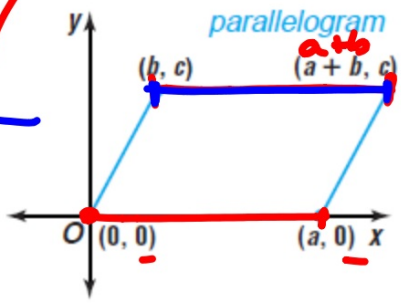
A(3,2) B(2, -4) C(-2, -3) D(-1, 3)

Is it a parallelogram?

How do you KNOW?







Use the fewest possible number of variables
Use logic to place vertices

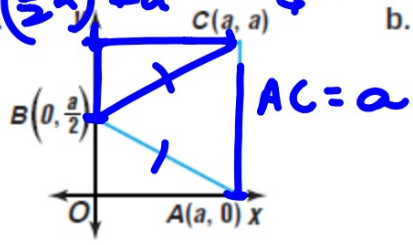
yes

yes

no

3. Determine whether each diagram represents an isosceles triangle. Explain your reasoning.

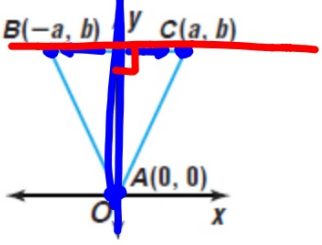
a.



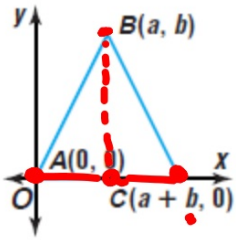
$CB = \left(\frac{1}{2}a\right)^2 + a^2 = \frac{5}{4}a^2$

$AC = a$

b.



c.



$AB = a^2 + \left(\frac{1}{2}a\right)^2 = \frac{5}{4}a^2$

Not by eyeball, have to have evidence...