

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)

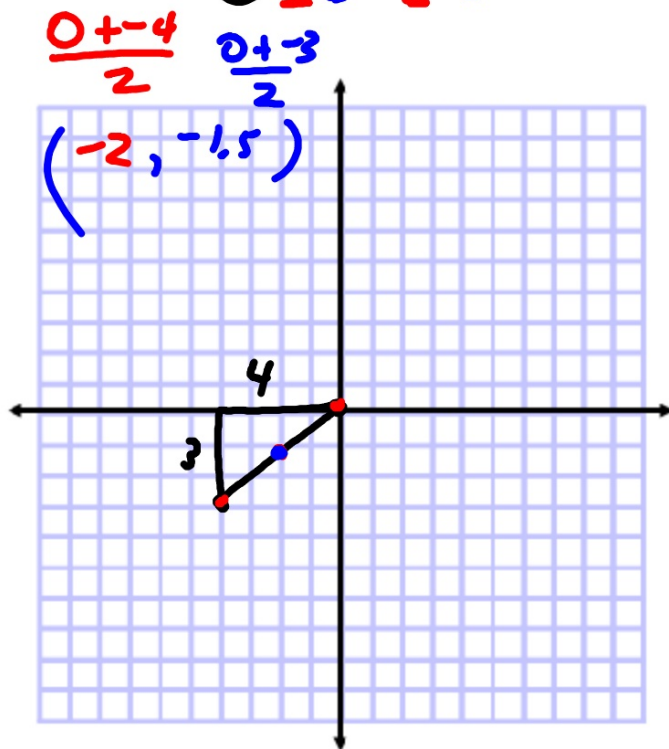
* Geometry, Algebra 1, Algebra 2

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. $(-2, 2), (0, 4)$



Ex. 3

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

Is it a parallelogram?

yes

How do you KNOW?

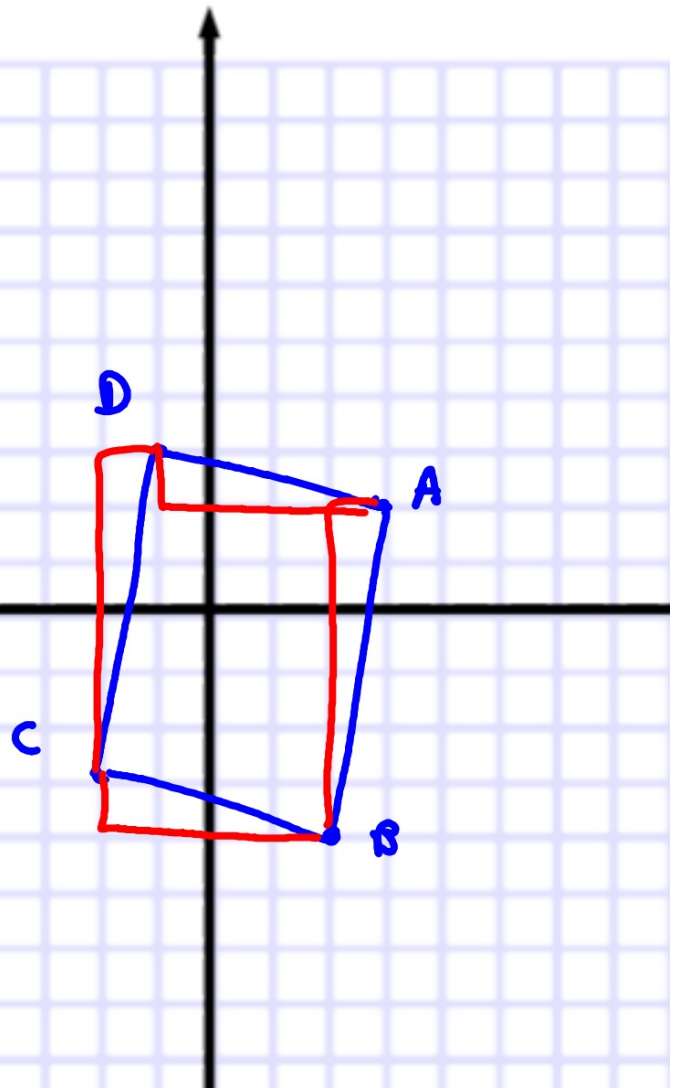
yes (?)

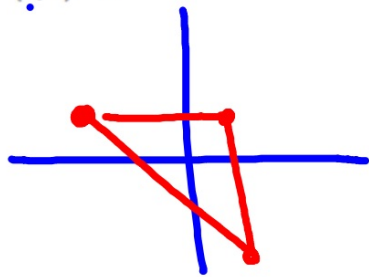
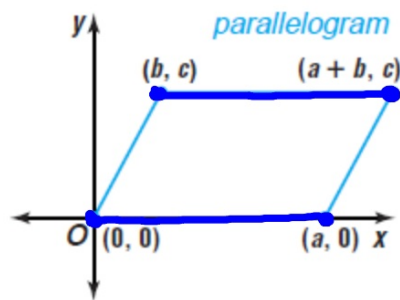
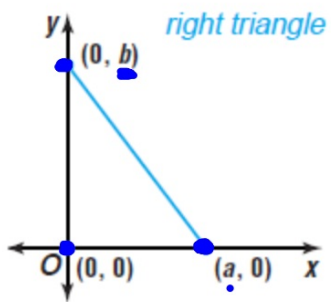
$$m\overline{DA} \stackrel{?}{=} m\overline{CB} \quad \cup$$

$\frac{-1}{4} \qquad \frac{-1}{4}$

$$m\overline{DC} \stackrel{?}{=} m\overline{AB} \quad \cup$$

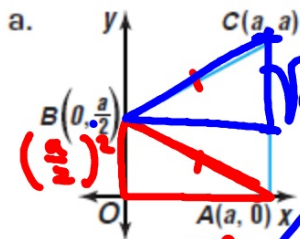
$\frac{6}{-1} \qquad \frac{6}{-1}$





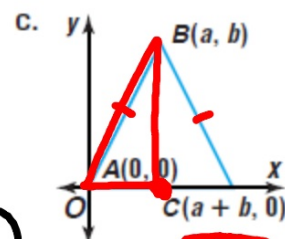
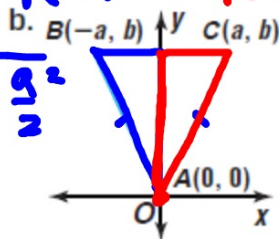
Use the fewest possible number of variables
Use logic to place vertices

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



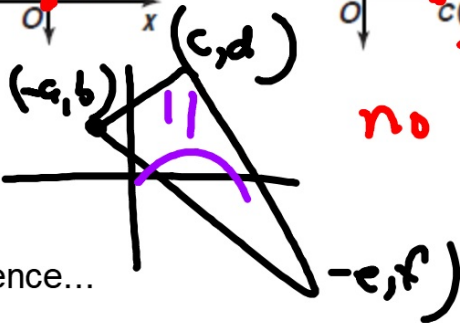
Same length

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



Same length

$$\sqrt{a^2 + \frac{a^2}{4}}$$



yes

Not by eyeball, have to have evidence...

10.1

13-350