

Questions on 5.6 HW?

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4. Quadrilateral BCDE below was formed by 2 sets of intersecting parallel lines. Figure 2 is the image of figure 1. It has been rotated  $180^\circ$ . Find the center of rotation for figure 1. Make a list of everything that has been preserved in the rotation. Then make a list of anything that has changed. Is quadrilateral BCDE a parallelogram? How do you know?

*preserved: parallel lines, congruent opposite sides, congruent opposite  $\angle$ s, diagonals bisect each other, consecutive  $\angle$ s are supp.*

**Go**

The following theorems all concern parallelograms:

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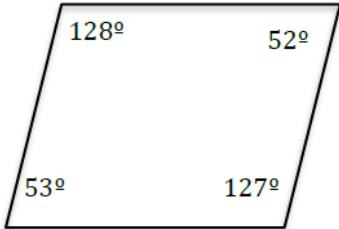
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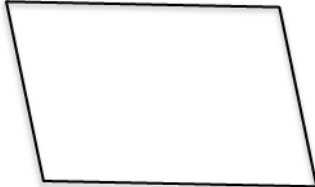
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The following theorems all concern parallelograms:

- ❖ Opposite sides of a parallelogram are congruent.
- ❖ Opposite angles of a parallelogram are congruent.
- ❖ Consecutive angles of a parallelogram are supplementary.
- ❖ The diagonals of a parallelogram bisect each other.

Give a reason from the list above that explains why it is NOT possible for each figure below to be a parallelogram. List ALL that apply.

5.  *#2 (or #3)*

6. 

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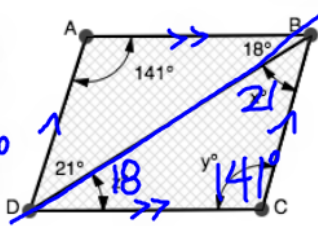
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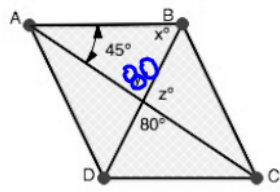
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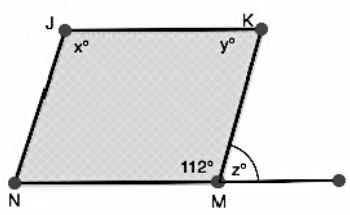
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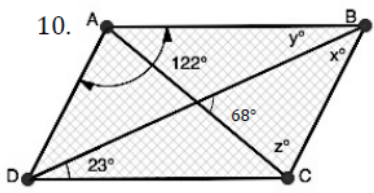
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**Each quadrilateral below is a parallelogram. Find the values of x, y, and z.**

7. 
  
 $z = 18^\circ$   
 $x = 21^\circ$   
 $y = 141^\circ$

8. 
  
 $z = 80^\circ$

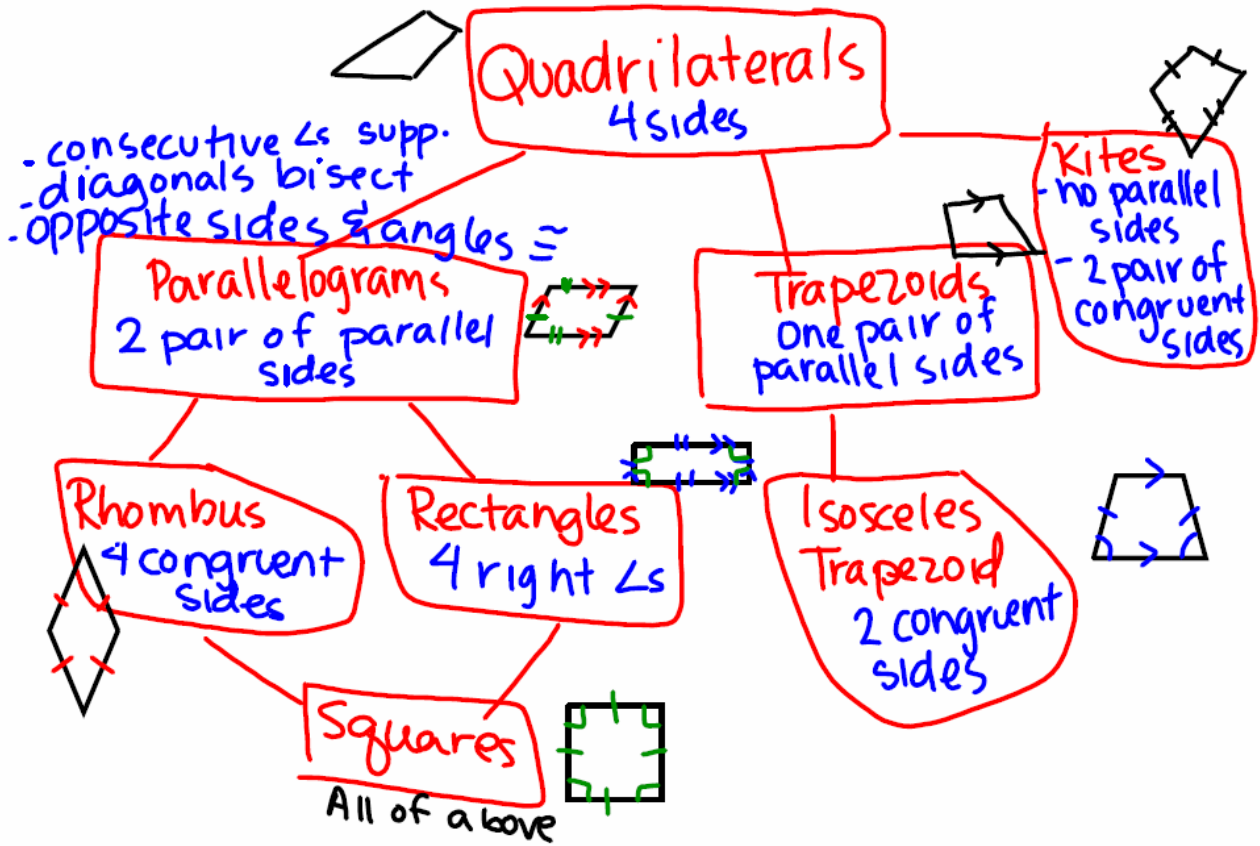
9. 

10. 

**Go**  
 Topic: Using correct mathematical symbols

**Rewrite the phrases below using correct mathematical symbols.**  
 Example: *Eleven plus eight is nineteen.*  $11 + 8 = 19$

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symbol.

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## 5.7 Guess My Parallelogram

### *A Practice Understanding Task*

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Tehani and Tia are playing a guessing game in which one person describes some of the features of a quadrilateral they have drawn and the other person has to name the type of quadrilateral.



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Here are some of the clues they gave each other. Decide what type of quadrilateral they are describing, and explain how you know.

1. The diagonals of this quadrilateral are perpendicular to each other.

square, rhombus

2. The diagonals of this quadrilateral are congruent.

square, rectangle, parallelogram, isosceles  
trapezoid

3. When rotated  $90^\circ$ , each diagonal of this quadrilateral gets superimposed on top of the other.

squares, rhombus

4. Consecutive angles of this quadrilateral are supplementary (that is, they add to  $180^\circ$ ).

parallelogram (squares, rectangles, para)

5. Consecutive angles of this quadrilateral are congruent.

square, rectangle

6. The diagonals of this quadrilateral are congruent and perpendicular to each other.

square

# Homework

Finish 5.7 "Ready, Set, Go"