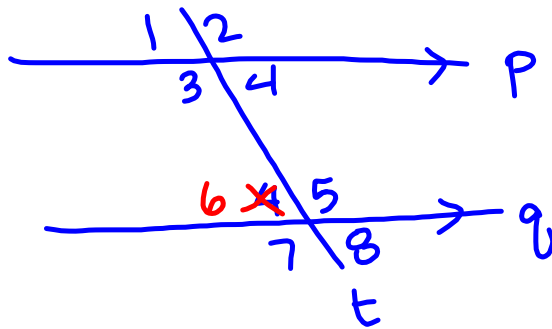Questions on 5.6 HW? Quiz soon, go over parallel lines cut by a transversal, exterior angles of a triangle and vertical angles.
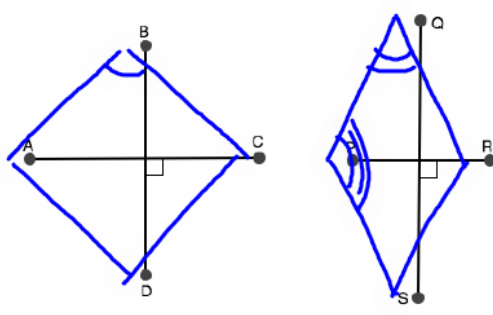
Sketch the quadrilateral by connecting the points in alphabetical order. Close the figure.

1. In both figures, the lines are perpendicular bisectors of each other.

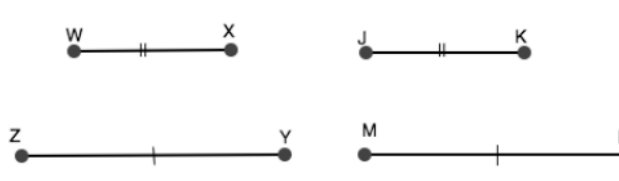   a. Are the quadrilaterals you sketched congruent?

    b. What additional requirement(s) is/are needed to make the figures congruent?

2. In both figures one set of opposite sides are parallel and congruent.

    a. Are the quadrilaterals you sketched congruent?

    b. What additional requirement(s) is/are needed to make the figures congruent?

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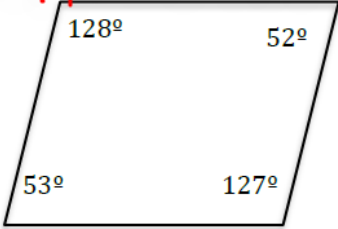
2

The following theorems all concern parallelograms:
1. ❖ Opposite sides of a parallelogram are congruent.
2. ❖ Opposite angles of a parallelogram are congruent.
3. ❖ Consecutive angles of a parallelogram are supplementary.
4. ❖ The diagonals of a parallelogram bisect each other.
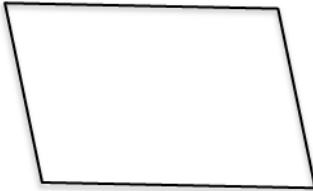
Give a reason from the list above that explains why it is NOT possible for each figure below to be a parallelogram. List ALL that apply.

5. #2-OPP. ∠s not ≅

128º   52º

53º   127º

6.

21 cm

14 cm   13 cm

22 cm

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3

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18°
141°
x°
21°
z°
y°

A   B
x°
45°
y°
z°
80°
D   C

9.

J   K
x°   y°

112° z°
N   M

10. A   B
122°   23°
35°
68°
z°
D   23°   C

$180 - 122 - 23 =$
$35°$
$180 - 68 - 35 =$
$112 - 35 = 77$

Go

Topic: Using correct mathematical symbols

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

11. Triangle ABC is congruent to triangle GHJ.   _____

12. Segment BV is congruent to segment DR.

8.50 x 11.00 in

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

11.　Triangle ABC is congruent to triangle GHJ.　$\triangle ABC \cong \triangle GHJ$

12.　Segment BV is congruent to segment PR.　_____

13.　Three feet are equal to one yard.　_____

14.　Line TR is parallel to line segment WQ.　_____

15.　Ray VP is perpendicular to segment GH.　_____

16.　Angle 3 is congruent to angle 5.　_____

17.　The distance between W and X is 7 feet.　$WX = 7 ft.$

18.　The length of segment AB is equal to the length of TR.　_____

19.　The measure of angle SRT is equal to the measure of angle CDE._____

20.　Explain when it is proper to use an equal sign and when it is proper to use the congruent symbol.

8.50 x 11.00 in

Feb 3-12:11 PM

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

11. Triangle ABC is congruent to triangle GHJ. $\triangle ABC \cong \triangle GHJ$ $m\overline{AB}$

12. Segment BV is congruent to segment PR.   _____

13. Three feet are equal to one yard.   _____

14. Line TR is parallel to line segment WQ.   _____

15. Ray VP is perpendicular to segment GH.   _____

16. Angle 3 is congruent to angle 5.   _____

17. The distance between W and X is 7 feet. $WX = 7 ft.$

18. The length of segment AB is equal to the length of TR.   _____

19. The measure of angle SRT is equal to the measure of angle CDE. $m\angle SRT = m\angle CDE$

20. Explain when it is proper to use an equal sign and when it is proper to use the congruent
     symbol.

8.50 x 11.00 in

Feb 3-12:18 PM
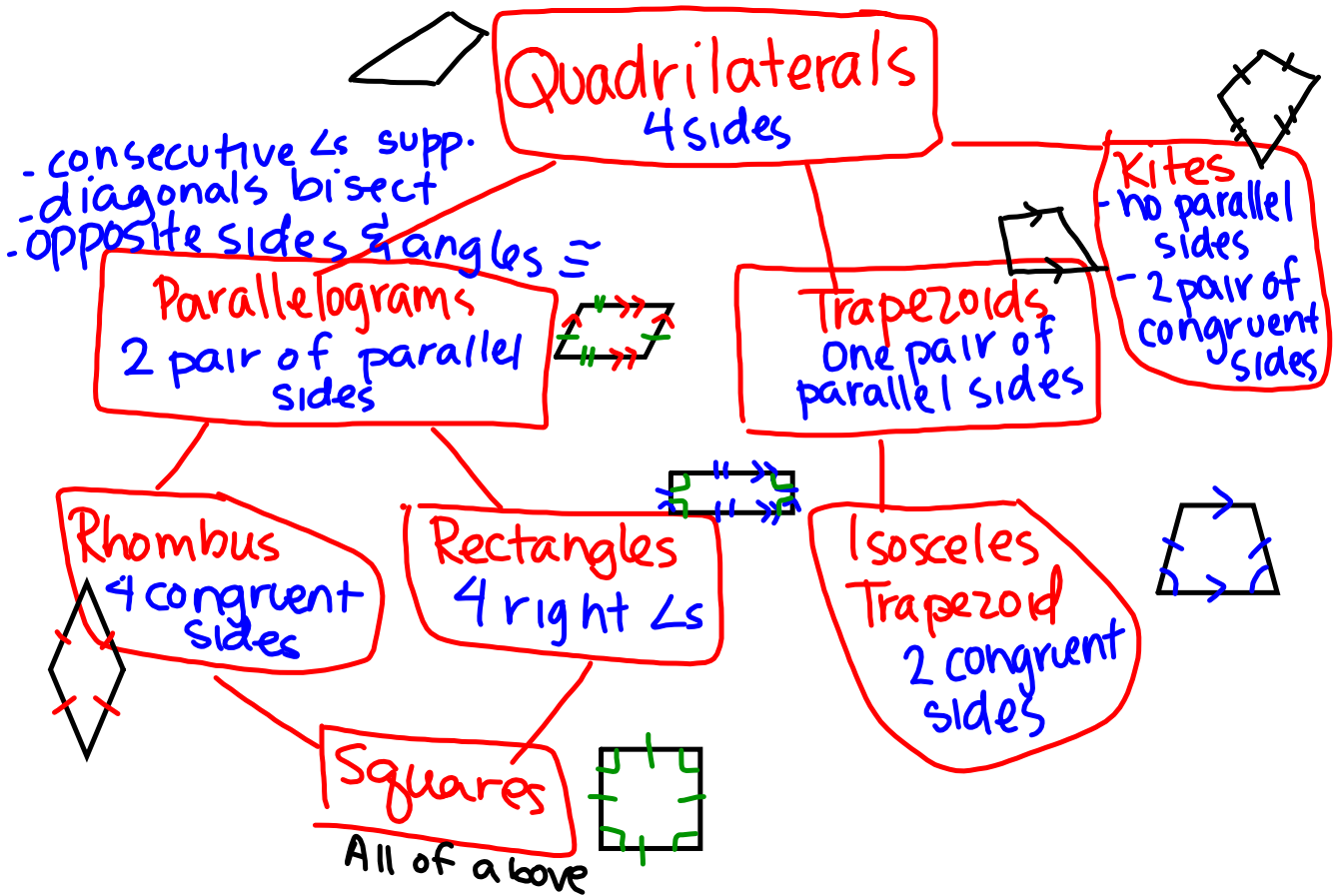
Rewrite the phrases below using correct mathematical symbols.

Example: Eleven plus eight is nineteen. $11 + 8 = 19$

11. Triangle ABC is congruent to triangle GHJ. $\triangle ABC \cong \triangle GHJ$ $m\overline{AB}$

12. Segment BV is congruent to segment PR.   _____

13. Three feet are equal to one yard.   _____

14. Line TR is parallel to line segment WQ.   _____

15. Ray VP is perpendicular to segment GH.   _____

16. Angle 3 is congruent to angle 5.   _____

17. The distance between W and X is 7 feet. $WX = 7\,ft.$

18. The length of segment AB is equal to the length of TR.   _____

19. The measure of angle SRT is equal to the measure of angle CDE. $m\angle SRT = m\angle CDE$

20. Explain when it is proper to use an equal sign and when it is proper to use the congruent symbol.

Quadrilaterals
4 sides

- consecutive ∠s supp.
- diagonals bisect
- opposite sides & angles ≅

Parallelograms
2 pair of parallel sides

Trapezoids
One pair of parallel sides

Kites
- no parallel sides
- 2 pair of congruent sides

Rhombus
4 congruent sides

Rectangles
4 right ∠s

Isosceles Trapezoid
2 congruent sides

Squares
All of above

Feb 3-12:19 PM

5.7 Guess My Parallelogram
A Practice Understanding Task

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.

   rectangle, square, isosceles trapezoid

3. When rotated 90°, each diagonal of this quadrilateral gets superimposed on top of the other.

   square, rhombus

4. Consecutive angles of this quadrilateral are supplementary (that is, they add to 180°).

square, rectangle, parallelogram

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"

Mar 28-9:36 AM