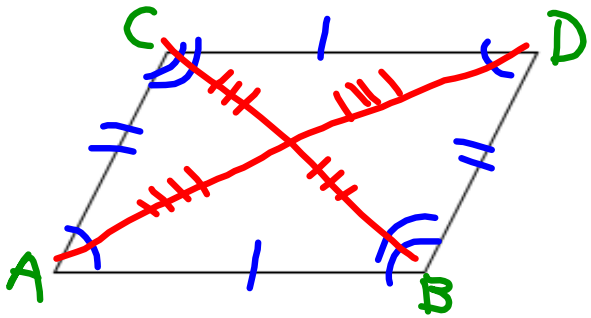
Chapter 6 – Polygons and Quadrilaterals
Section 6-2: Properties of Parallelograms
Section 6-3: Proving that a Quadrilateral is a Parallelogram

Parallelogram: Quadrilateral with opposite sides parallel

Theorem: If a Quadrilateral is a Parallelogram, then…

- Opposite sides are ≅
- opposite angles are ≅
- Consecutive angles are supplementary
- Diagonals bisect each other.
- opposite sides are pallelell



Theorem: If …

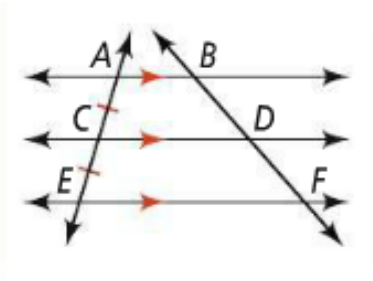
- opposite sides are parallel
- both pairs of sides are ≅
- both pairs of opp. angles are ≅
- an angle is supplementary to both consecutive angles
- diagonals bisect each other
- One pair of opp. sides is Both parallel & ≅

…Then the Quadrilateral is a Parallelogram.

Lesson 6-2 & 6-3

If you know that $\overleftrightarrow{AB} \| \overleftrightarrow{CD} \| \overleftrightarrow{EF}$ and $\overline{AC} \cong \overline{CE}$, what can you conclude about $\overline{BD}$ and $\overline{DF}$? Explain.

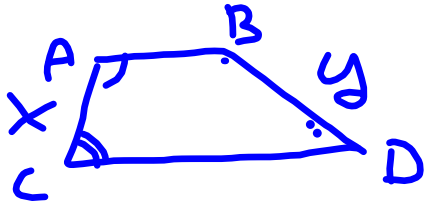
$\overline{BD} \cong \overline{DF}$

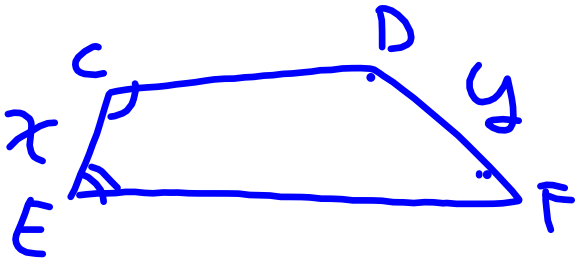


All angles are $\cong$

Similar shapes

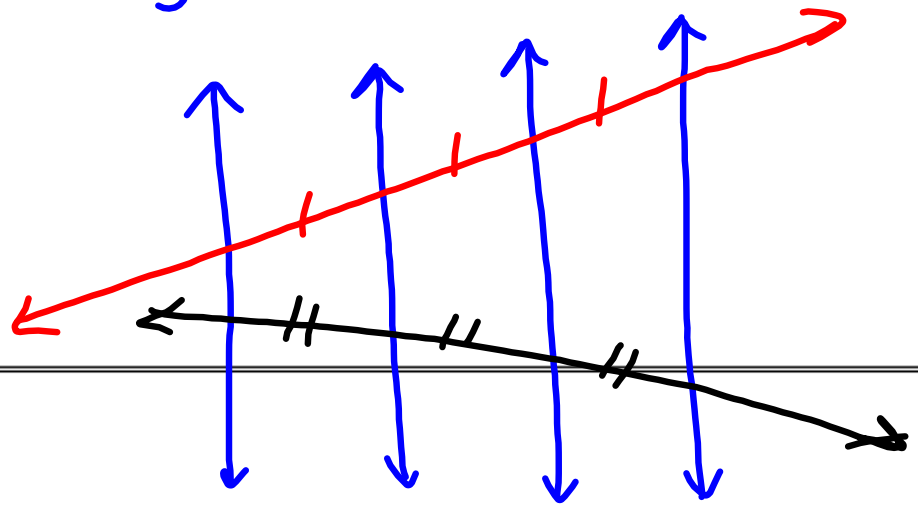
equal side ratios





Theorem: If three (or more) parallel lines cut off congruent segments on one transversal, then…

they cut ≅ segments on every transversal



Own Your Own:
Do Problems 1-4 (Section 6-2) and Problem 1-3 (Section 6-3) on PearsonRealize and the Got It's in your Student Companion.
Do Lesson Quizzes 6-2 and 6-3 on PearsonRealize.

Optional: Answers will be posted on-line
Do pages 421-422 #11-20.