Chapter 2: Perpendicular / Parallel
Lesson 2-4: Angles and Parallel Lines
Classwork

name _____
date _____
period ___

1. Name all pairs of corresponding angles:

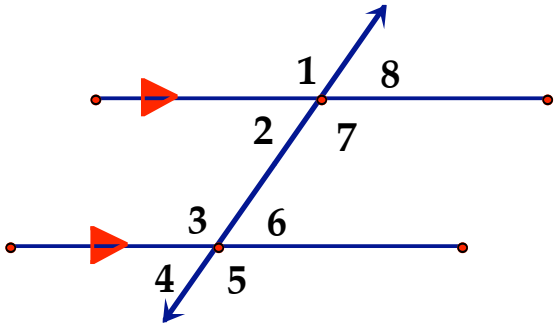
2. Name all pairs of alternate interior angles:

3. Name all pairs of alternate exterior angles:

4. Name all pairs of consecutive interior angles:

5. Name all pairs of vertical angles:

6. Name all linear pairs of angles:



7. Find angle measures
m<1 =
m<2 =
m<3 =
m<4 =
m<5 =
m<6 = 42°
m<7 =
m<8 =

8. Name all pairs of corresponding angles:

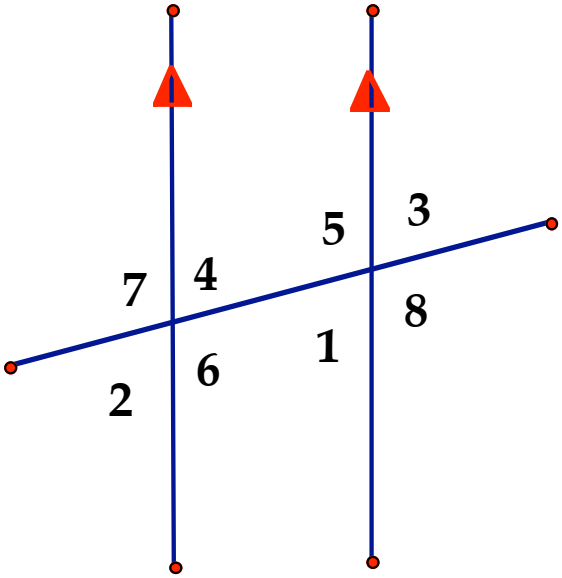
9. Name all pairs of alternate interior angles:

10. Name all pairs of alternate exterior angles:

11. Name all pairs of consecutive interior angles:

12. Name all pairs of vertical angles:

13. Name all linear pairs of angles:

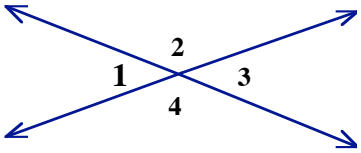


14. Find angle measures
m<1 =
m<2 =
m<3 =
m<4 =
m<5 =
m<6 = 108°
m<7 =
m<8 =

Directions: Create a logical series of statements that will conclude each of the following "prove" statements. Each statement must have a mathematical reason.

15. **Given:** the sketch

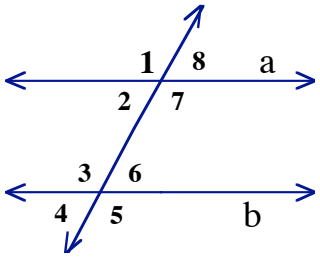
Prove: Vertical Angles are Congruent
($\angle 1 \cong \angle 3$)



STATEMENTS	REASONS

16. **Given:** a || b

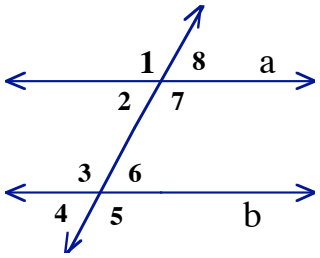
Prove: Alternate Interior Angles are Congruent
($\angle 2 \cong \angle 6$)



STATEMENTS	REASONS

17. **Given:** a || b

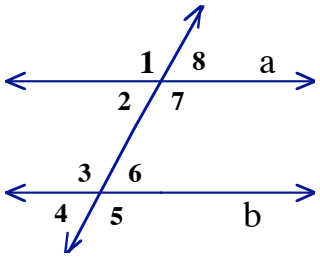
Prove: Alternate Exterior Angles are Congruent
($\angle 1 \cong \angle 5$)



STATEMENTS	REASONS

18. **Given:** a ∥ b

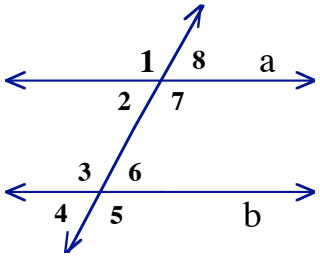
Prove: Consecutive Interior Angles are Supplementary (m∠2 + m∠3 = 180°)



STATEMENTS	REASONS

19. **Given:** a ∥ b

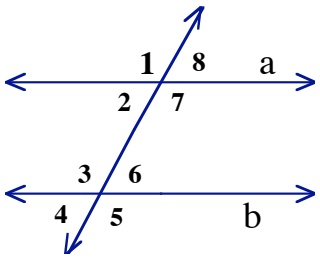
Prove: m∠1 + m∠4 = 180°



STATEMENTS	REASONS

20. **Given:** a ∥ b

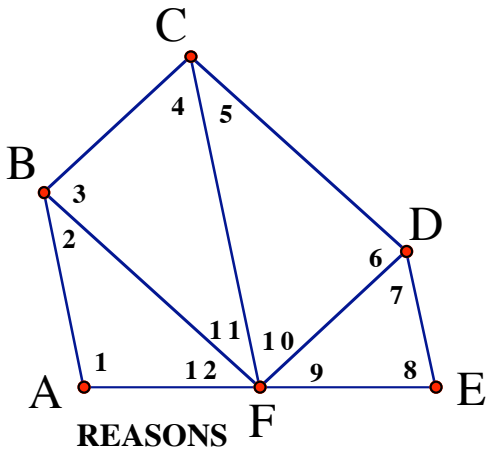
Prove: ∠1 is supplementary to ∠6



STATEMENTS	REASONS

21. **Given:** $\overline{AB} \parallel \overline{CF} \parallel \overline{ED}$
$\overline{BC} \parallel \overline{FD}$
$\overline{FB} \parallel \overline{DC}$

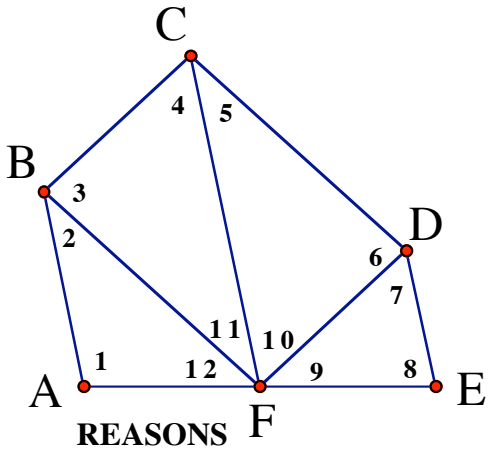
Prove: $\angle 2 \cong \angle 5$



STATEMENTS	REASONS

22. **Given:** $\overline{AB} \parallel \overline{CF} \parallel \overline{ED}$
$\overline{BC} \parallel \overline{FD}$
$\overline{FB} \parallel \overline{DC}$

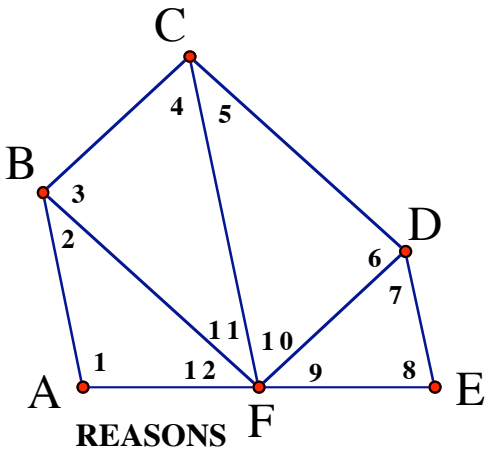
Prove: $\angle 3 \cong \angle 6$



STATEMENTS	REASONS

23. **Given:** $\overline{AB} \parallel \overline{CF} \parallel \overline{ED}$
$\overline{BC} \parallel \overline{FD}$
$\overline{FB} \parallel \overline{DC}$

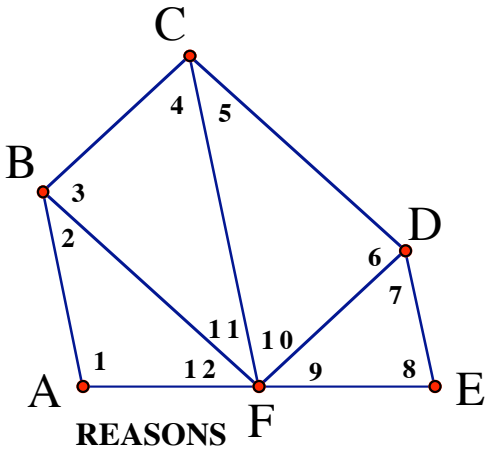
Prove: $m\angle 3 = m\angle 12 + m\angle 9$



STATEMENTS	REASONS

24. **Given:** $\overline{AB} \parallel \overline{CF} \parallel \overline{ED}$
$\overline{BC} \parallel \overline{FD}$
$\overline{FB} \parallel \overline{DC}$

Prove: $m\angle 1 + m\angle 2 + m\angle 12 = 180^\circ$



STATEMENTS	REASONS