

## Worksheet Parallel Line Proofs #2

- 1) Statements
- 1)  $\vec{CE} \parallel \vec{AB}$
  - 2)  $\angle A \cong \angle 2$
  - 3)  $\angle A \cong \angle 1$
  - 4)  $\angle 1 \cong \angle 2$
- Reasons
- 1) Given
  - 2) Given
  - 3) IF two lines are  $\parallel$  + cut by a trans, then corresponding  $\angle$ 's are  $\cong$
  - 4) Trans prop of  $\cong$

- 2) Statements
- 1)  $\vec{AB}$  bisects  $\angle CAD$
  - 2)  $\vec{CB} \parallel \vec{AD}$
  - 3)  $\angle 2 \cong \angle 3$
  - 4)  $\angle 3 \cong \angle 1$
  - 5)  $\angle 1 \cong \angle 2$
- Reasons
- 1) Given
  - 2) Given
  - 3) Def. of  $\angle$  bisector
  - 4) IF two lines are parallel + cut by a trans, then alt. int.  $\angle$ 's are  $\cong$
  - 5) Trans prop of  $\cong$

- 3) Statements
- 1)  $\vec{AC} \parallel \vec{DF}$
  - 2)  $\vec{AB} \parallel \vec{FE}$
  - 3)  $\angle 2 \cong \angle 3$
  - 4)  $\angle 1 \cong \angle 2$
  - 5)  $\angle 3 \cong \angle 4$
  - 6)  $\angle 1 \cong \angle 4$
- Reasons
- 1) Given
  - 2) Given
  - 3) Given
  - 4) IF two lines are  $\parallel$  + cut by a trans, then alt. int.  $\angle$ 's are  $\cong$
  - 5) IF two lines  $\parallel$  + cut by trans then alt. int.  $\angle$ 's are  $\cong$
  - 6) Trans prop. of  $\cong$

4) Statements

- 1)  $\overline{AB} \parallel \overline{CD}$
- 2)  $\overline{FC} \parallel \overline{BE}$
- 3)  $\overline{CF}$  bisects  $\triangle ACD$
- 4)  $\angle 2 \cong \angle 3$
- 5)  $\angle 3 \cong \angle 1$
- 6)  $\angle 2 \cong \angle 4$
- 7)  $\angle 1 \cong \angle 4$

Reasons

- 1) Given
- 2) Given
- 3) Given
- 4) def. of  $\angle$  bisector
- 5) IF two lines are  $\parallel$  + cut by trans, then alt. int.  $\angle$ 's are  $\cong$
- 6) IF two lines are  $\parallel$  + cut by trans, then corresp.  $\angle$ 's are  $\cong$
- 7) Trans prop.

5) Statements

- 1)  $\overline{AB} \parallel \overline{BT}$
- 2)  $\angle 3 \cong \angle 4$
- 3)  $\angle 2 \cong \angle 3$
- 4)  $\angle 1 \cong \angle 4$
- 5)  $\angle 1 \cong \angle 2$

Reasons

- 1) Given
- 2) Given
- 3) IF two lines are parallel + cut by a trans, then alt. int.  $\angle$ 's are  $\cong$
- 4) IF two lines are parallel + cut by a trans, then corresp.  $\angle$ 's are  $\cong$
- 5) Trans prop of  $\cong$