CONGRUENT TRIANGLES PROOF PUZZLES

Directions

On each of the following pages, cut each card apart and place into a cup or Ziploc baggie. Students are to take the baggie and determine how to arrange the cards into a coherent proof. They can then copy the proof into their notebooks or on paper to turn in.

|  |  |
| --- | --- |
| GIVEN:  E is the midpoint of RD;    PROVE: |  |
| E is the midpoint of RD | Given |
|  | Definition of Midpoint |
|  | Reflexive Property of Congruence |
|  | Given |
|  | SSS Triangle Congruence Theorem |
| **GIVEN**:  ;  **PROVE:** |  |
| ; | Given |
|  | If two parallel lines are cut by a transversal, then alternate interior angles are congruent |
|  | If two parallel lines are cut by a transversal, then alternate interior angles are congruent |
|  | Reflexive Property of Congruence |
|  | ASA Triangle Congruence Theorem |
| **GIVEN**:  M is the midpoint of  and  **PROVE:** |  |
| M is the midpoint of  and | Given |
|  | Definition of midpoint |
|  | Definition of midpoint |
|  | Vertical angles are congruent |
|  | SAS Triangle Congruence Theorem |
| **GIVEN**:  J is the midpoint of    **PROVE:** |  |
|  | Given |
|  | If two parallel lines are cut by a transversal, then alternate interior angles are congruent |
|  | If two parallel lines are cut by a transversal, then alternate interior angles are congruent |
| J is the midpoint of | Given |
|  | Definition of midpoint |
|  | AAS Triangle Congruence Theorem |
| GIVEN:  EASY is a rectangle  **PROVE:** |  |
| EASY is a rectangle | Given |
|  | Opposite Sides of a Rectangle are Congruent |
|  | Opposite Sides of a Rectangle are Congruent |
|  | Reflexive Property of Congruence |
|  | SSS Triangle Congruence Theorem |