Geometry
Unit: Introduction to Proof
Section: Informal and Two Column Proofs

Cloze Activity: Two-column Proof

Directions: Fill in the blanks of the two-column proof with letters a-h

Lines a and c crossed by lines m and l, the angles at each intersection point are labeled numerically, starting with the top left angle and moving clockwise around; where m intersects a, the angles are 1, 2, 3, 4; where l intersects a, the angles are 5, 6, 7, 8; where l intersects c, the angles are 9, 10, 11, 12; where m intersects c, the angles are 13, 14, 15, 16.

Given: Lines m and l are parallel and lines a and c are parallel.
Prove: Angle 6 is congruent to angle 16.

Statement	Reason
Lines m and l are parallel and lines a and c are parallel	1.
2.	Definition of corresponding angles
Angle 6 is congruent to angle 10	3.
4.	5.
Angle 10 is congruent to angle 16	6.
7.	8.

a. angle 10 and angle 16 are alternate exterior angles

b. angle 6 is congruent to angle 16

c. Definition of alternate exterior angles

d. Given

e. Transitive property

f. angle 6 and angle 10 are corresponding angles

g. Alternate exterior angles are congruent

h. Corresponding angles are congruent

Answers:

1. d

2. f

3. h

4. a

5. c

6. g

7. b

8. e