

# Key

## Day 2 Proof Practice

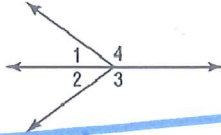
EX1.

Given:  $\angle 1$  and  $\angle 4$  are a linear pair

$$m\angle 3 + m\angle 1 = 180$$

Prove:  $\angle 3$  and  $\angle 4$  are congruent

$$\angle 3 \cong \angle 4$$



1.  $\angle 1$  and  $\angle 4$  are a linear pair  
 $\angle 3 + \angle 1 = 180^\circ$
2.  $\angle 1 + \angle 4 = 180^\circ$
3.  $\angle 3 + \angle 1 = \angle 1 + \angle 4$
4.  $\angle 3 \cong \angle 4$

1. given

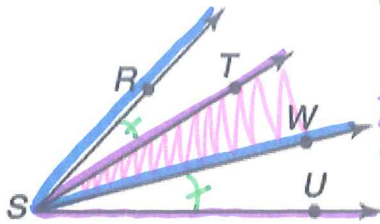
2. linear pairs are suppl.

3. Substitution

4. Subtraction

Ex 2. Given:  $\angle RSW \cong \angle TSU$

Prove:  $\angle RST \cong \angle WSU$



1.  $\angle RSW \cong \angle TSU$

2.)  $\angle RSW = \angle RST + \angle TSW$

$$\angle TSU = \angle WSU + \angle TSW$$

3.  $\angle RST + \angle TSW = \angle WSU + \angle TSW$

4.  $\angle RST \cong \angle WSU$

1. given

2. angle addition

3. Substitution

4. subtraction

Ex 3. Given  $\angle 1 \cong \angle 4$

Prove:  $\angle 2 \cong \angle 3$



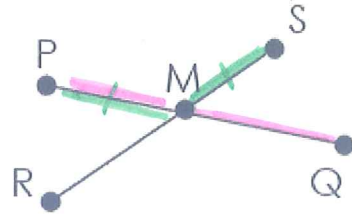
1.  $\angle 1 \cong \angle 4$
2.  $\angle 1 + \angle 2 = 180^\circ$   
 $\angle 4 + \angle 3 = 180^\circ$
3.  $\angle 1 + \angle 2 = \angle 4 + \angle 3$
4.  $\angle 1 + \angle 2 = \angle 1 + \angle 3$
5.  $\angle 2 \cong \angle 3$

1. given
2. linear pairs are suppl.
3. Substitution
4. substitution
5. subtraction

EX4. Given:  $PM \cong MS$

RS bisects PQ

Prove:  $MS \cong MQ$



- 1.)  $PM \cong MS$   
RS bisects  $\overline{PQ}$
2.  $PM \cong MQ$
3.  $MS \cong MQ$

- 1.) given
2. def of segment bisector
3. Substitution