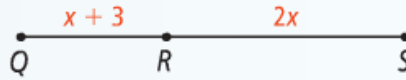


31. **Algebra** Fill in the reason that justifies each step.

**Given:**  $QS = 42$

**Prove:**  $x = 13$



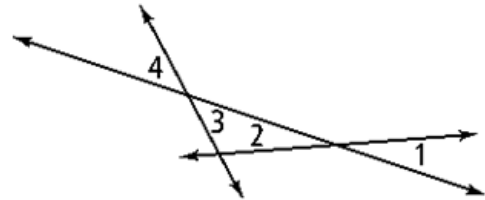
Statements	Reasons
1) $QS = 42$	1) a. ? <b>Given</b>
2) $QR + RS = QS$	2) b. ? <b>Segment Addition</b>
3) $(x + 3) + 2x = 42$	3) c. ? <b>Substitution Property</b>
4) $3x + 3 = 42$	4) d. ? <b>Simplify</b>
5) $3x = 39$	5) e. ? <b>Subtraction Property</b>
6) $x = 13$	6) f. ? <b>Division Property</b>

Sep 15-9:06 AM

**Developing Proof**

**Given:**  $\angle 1 \cong \angle 4$

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



$\angle 1 \cong \angle 4$   
 $\angle 3 \cong \angle 4$   
 $\angle 1 \cong \angle 2$   
 $\angle 2 \cong \angle 4$   
 $\angle 2 \cong \angle 3$

**Given**  
**Vertical  $\angle$ s  $\cong$**   
**Vertical  $\angle$ s  $\cong$**   
**Transitive**  
**Transitive**

Sep 15-9:04 AM

Find a pattern for each sequence. Describe the pattern and use it to show the next two terms.

8. 1000, 100, 10, ...  $\div 10$

9. 5, -5, 5, -5, ...  $\cdot -1$

10. 34, 27, 20, 13, ...  $-7$

11. 6, 24, 96, 384, ...  $\cdot 4$

1, 0.1 or  $\frac{1}{10}$   
 5, -5  
 6, -1  
 1536, 6144

Sep 15-9:11 AM

Use the Law of Detachment to make a conclusion.

27. If you practice tennis every day, then you will become a better player. Colin practices tennis every day.

28.  $\angle 1$  and  $\angle 2$  are supplementary. If two angles are supplementary, then the sum of their measures is 180.

Use the Law of Syllogism to make a conclusion.

29. If two angles are vertical, then they are congruent. If two angles are congruent, then their measures are equal.

Colin will be a better player

$$m\angle 1 + m\angle 2 = 180$$

If 2  $\angle$ s vertical then measures =.

Sep 15-9:12 AM

If possible, draw a conclusion. If it is not possible to make a conclusion, tell why.

1. If you pass a road test, you will get your driver's license. **She got her license**  
Tamara passed her road test.  
To start, identify the hypothesis ( $p$ ) of the first conditional.  
Then compare it to the second statement.
2. If an angle is a right angle, then it is not acute. **No Conclusion**  
 $m\angle Q \neq 90$
3. If you swim 100 m in less than 90 s, you will be on the swim team. **No Conclusion**  
Jeremy swam 200 m in 190 s.
4. If you arrive at the theater by 2:00 P.M., you can see the show. **Julie can see the show!**  
Julie arrived at the theater at 1:45 P.M.
5. If a triangle has one obtuse angle, then it is an obtuse triangle. **No Conclusion**  
 $\triangle ABC$  has an acute angle.

Sep 15-9:13 AM