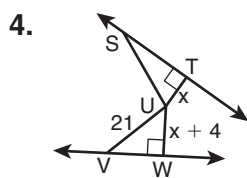
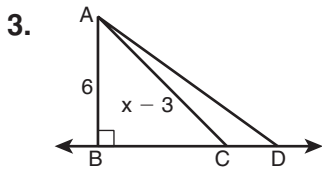
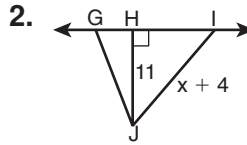
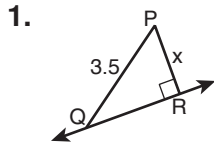


**LESSON**  
**3-4** **Practice B**  
**Perpendicular Lines**

For Exercises 1–4, name the shortest segment from the point to the line and write an inequality for  $x$ . (*Hint: One answer is a double inequality.*)

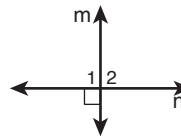


Complete the two-column proof.

5. **Given:**  $m \perp n$

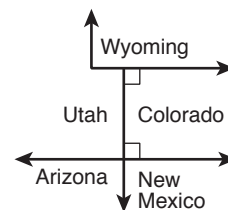
**Prove:**  $\angle 1$  and  $\angle 2$  are a linear pair of congruent angles.

**Proof:**



Statements	Reasons
1. a. _____	1. Given
2. b. _____	2. Def. of $\perp$
3. $\angle 1 \cong \angle 2$	3. c. _____
4. $m\angle 1 + m\angle 2 = 180^\circ$	4. Add. Prop. of =
5. d. _____	5. Def. of linear pair

6. The Four Corners National Monument is at the intersection of the borders of Arizona, Colorado, New Mexico, and Utah. It is called the four corners because the intersecting borders are perpendicular. If you were to lie down on the intersection, you could be in four states at the same time—the only place in the United States where this is possible. The figure shows the Colorado-Utah border extending north in a straight line until it intersects the Wyoming border at a right angle. Explain why the Colorado-Wyoming border must be parallel to the Colorado–New Mexico border.




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