

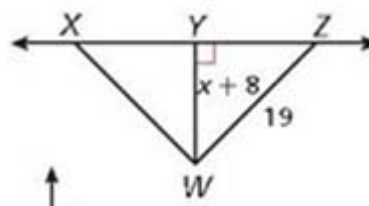
3.4 Day 2 Homework

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#6-7, 10-12, 14, 16-21, 22, 24, 31, 33

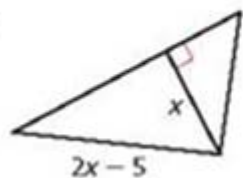
6. Name the shortest segment from point  $W$  to  $\overline{XZ}$ .

7. Write and solve an inequality for  $x$ .

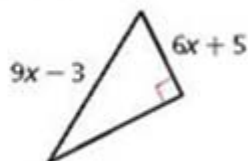


For each diagram, write and solve an inequality for  $x$ .

10.

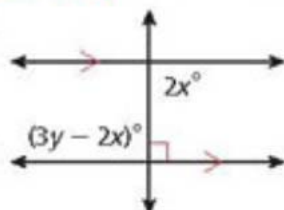


11.

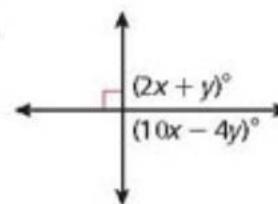


**Multi-Step** Solve to find  $x$  and  $y$

12.



14.



Determine if there is enough information given in the diagram to prove each statement.

16.  $\angle 1 \cong \angle 2$

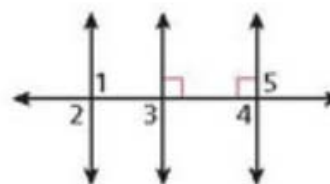
17.  $\angle 1 \cong \angle 3$

18.  $\angle 2 \cong \angle 3$

19.  $\angle 2 \cong \angle 4$

20.  $\angle 3 \cong \angle 4$

21.  $\angle 3 \cong \angle 5$



22. **Critical Thinking** Are the Reflexive, Symmetric, and Transitive Properties true for perpendicular lines? Explain why or why not.

Reflexive:  $\ell \perp \ell$

Symmetric: If  $\ell \perp m$ , then  $m \perp \ell$ .

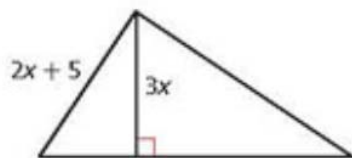
Transitive: If  $\ell \perp m$  and  $m \perp n$ , then  $\ell \perp n$ .

24. **Geography** Felton Avenue, Arlee Avenue, and Viehl Avenue are all parallel. Broadway Street is perpendicular to Felton Avenue. Use the satellite photo and the given information to determine the values of  $x$  and  $y$ .



31. Which inequality is correct for the given diagram?

- Ⓐ  $2x + 5 < 3x$       Ⓒ  $2x + 5 > 3x$   
 Ⓑ  $x > 1$               Ⓓ  $x > 5$



33. If  $\ell \perp m$ , which statement is NOT correct?

- Ⓐ  $m\angle 2 = 90^\circ$   
 Ⓑ  $m\angle 1 + m\angle 2 = 180^\circ$   
 Ⓒ  $\angle 1 \cong \angle 2$   
 Ⓓ  $\angle 1 \perp \angle 2$

