



3-4 Solve It!




Look at the angle markings. What do they tell you?

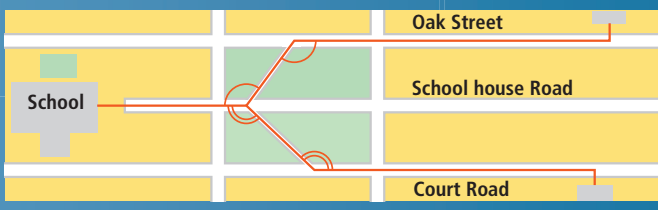


SOLVE IT!

Getting Ready!

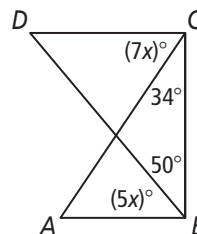


Jude and Jasmine leave school together to walk home. Then Jasmine cuts down a path from Schoolhouse Road to get to Oak Street and Jude cuts down another path to get to Court Road. Below is a diagram of the route each follows home. What conjecture can you make about Oak Street and Court Road? Explain.

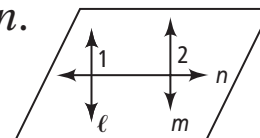


3-4 Lesson Quiz

1. What value of x results in $\overline{AB} \parallel \overline{CD}$?



2. In a plane, if $l \perp n$ and $l \parallel m$, prove that $m \perp n$.



3. **Do you UNDERSTAND?** A fly and an ant are sitting in the middle of a floor. If the fly starts moving along a straight path of his choice, will the ant be able to move along a parallel path?

Answers

Solve It!

Oak Street and Court Road are \parallel . The pairs of \cong alt. int. \sphericalangle s show that both Oak Street and Court Road are \parallel to Schoolhouse Road.

Lesson Quiz

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- Since $l \parallel m$, $\angle 1 \cong \angle 2$ because they are corresponding angles.
 $m\angle 1 = m\angle 2$ by definition of congruent angles.
 Because $\angle 1$ is a right angle, $m\angle 1 = 90$. By substitution,

$m\angle 2 = 90$. By definition of right angles, $\angle 2$ is a right angle. So, by the definition of perpendicular lines, $m \perp n$.

- Not necessarily; if the fly's path goes straight up, for instance, the ant cannot move in a parallel path.