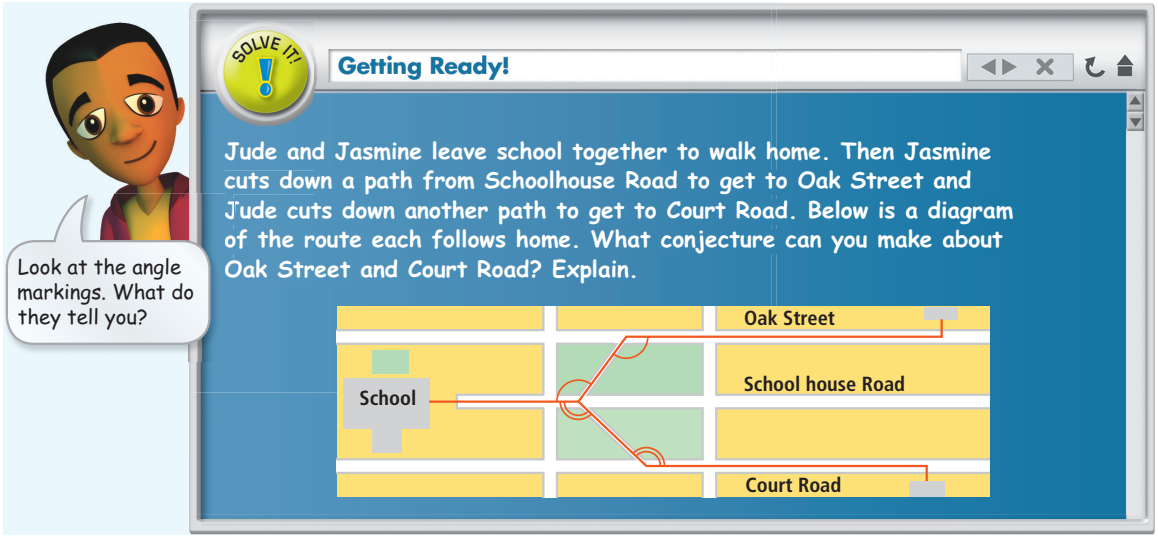
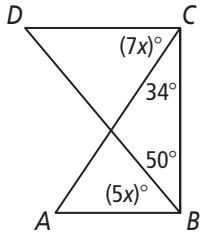
3-4 Solve It!

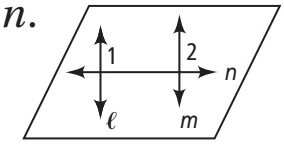


3-4 Lesson Quiz

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. $\measuredangle$s show that both Oak Street and Court Road are $\parallel$ to Schoolhouse Road.

Lesson Quiz

1. 8

2. Since $\ell \parallel m$, $\angle 1 \cong \angle 2$ 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, $m \perp n$.

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

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