


## 3-3 Solve It!

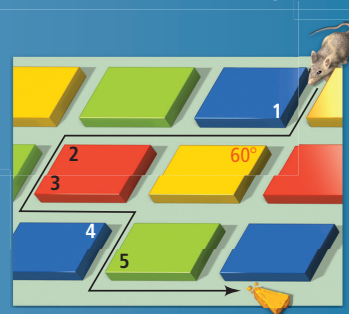


You don't need a protractor. You can use what you learned in Lesson 3-2 to solve this maze problem.

**SOLVE IT!**

**Getting Ready!**

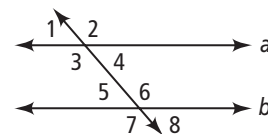
The maze below has two intersecting sets of parallel paths. A mouse makes five turns in the maze to get to a piece of cheese. Follow the mouse's path through the maze. What are the number of degrees at each turn? Explain how you know.



## 3-3 Lesson Quiz

Use the figure to answer each question.

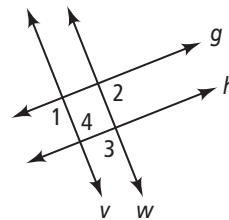
1. If  $m\angle 1 = 42$ , what must the measure of  $\angle 7$  be in order to prove  $a \parallel b$ ?



2. **Do you UNDERSTAND?** Suppose  $m\angle 3 = 128$  and  $m\angle 6 = (10x + 8)$ . What value of  $x$  would result in  $a \parallel b$ ?
3. Which theorem or postulate would you use in Exercise 2 to prove that  $a \parallel b$ ?

Use the figure for Questions 4 and 5.

4. If  $g \parallel h$  and  $m\angle 2 = 88$ , what is  $m\angle 3$ ?
5. If  $v \parallel w$  and  $m\angle 1 = 120$ , what is  $m\angle 2$ ?



### Answers

#### Solve It!

Turn 1:  $120^\circ$ , turn 2:  $120^\circ$ , turn 3:  $60^\circ$ , turn 4:  $60^\circ$ , turn 5:  $60^\circ$ ; explanations may vary. Sample: When a transversal intersects two  $\parallel$  lines, the  $\sphericalangle$  formed are  $\cong$

or suppl. If you know the measure of one of those  $\sphericalangle$ , you can use the properties of  $\parallel$  lines to find the measures of the other seven  $\sphericalangle$ .

#### Lesson Quiz

1. 138
2. 12
3. Converse of the Alternate Interior Angles Theorem
4. 92
5. 60