



## 6-3 Solve It!



**SOLVE IT!**

**Getting Ready!**

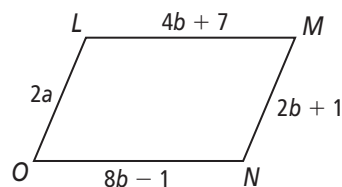
Each section of glass in the exterior of a building in Macau, China, forms an equilateral triangle. Do you think the window washer's feet stay parallel to the ground as he lands at each level of windows? Explain. (Assume that the bases of the lowest triangles are parallel to the ground.)



Can you find parallelograms in the pattern?

## 6-3 Lesson Quiz

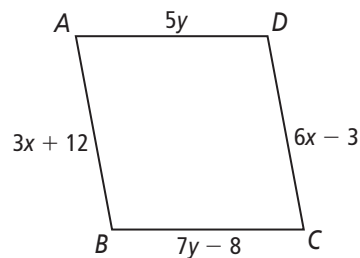
1. For what value of  $a$  must  $LMNO$  be a parallelogram?



2. Can you prove  $ABCD$  is a parallelogram based on the given information? Explain.

**Given:**  $X = 5, Y = 4$

**Prove:**  $ABCD$  is a parallelogram



3. Do you UNDERSTAND? Quadrilateral  $QRST$  has two pairs of congruent sides, but it is not a parallelogram. What figure is it? What further condition would it have to satisfy to be a parallelogram?

### Answers

#### Solve It!

Yes; explanations may vary.

Sample:  $\sphericalangle$ s are  $\cong$  corresp.  $\sphericalangle$ s, so the horizontal lines are  $\parallel$ , or alt.

int.  $\sphericalangle$ s are  $\cong$ , so the lines are  $\parallel$ .

#### Lesson Quiz

1. 2.5

2. Yes, by Theorem 6-8

3. The figure is a kite. To be a parallelogram, it would have to have pairs of *opposite* congruent sides, not just congruent sides.