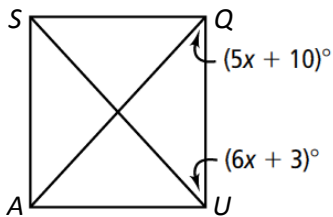


# 10.1 • Squares & Rectangles

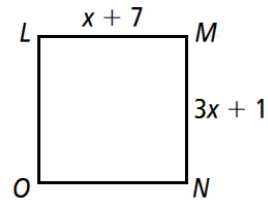
1. Use the property: *Opposite sides of a square are parallel* to complete the proof on page 746 of your text.

STATEMENTS	REASONS

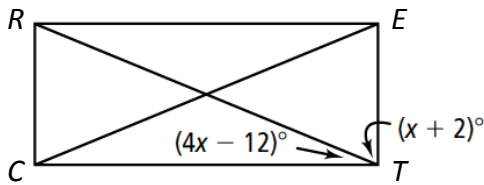
2. *SQUA* is a square. Find  $x$ .



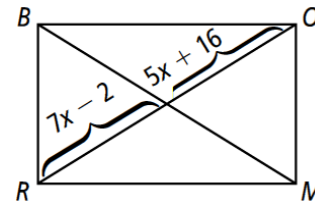
3. Find  $x$  AND the area of square *LMNO*.



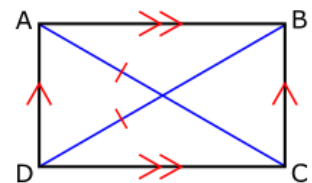
4. *RECT* is a rectangle. Find  $x$ .



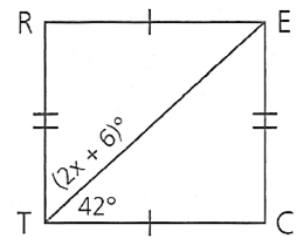
5. *BOMR* is a rectangle. Find  $x$ .



6. *ABCD* is a rectangle.  $AB = x + 1$ ,  $BC = 4x$ ,  $CD = y$ , &  $AD = 3y$
- Set up and solve a system of equations to find the values of the variables.
  - Find the area of *ABCD*.



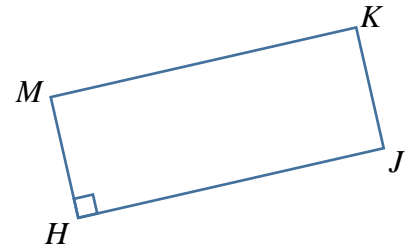
7. In order for  $RECT$  to be a rectangle, what must the value of  $x$  be?



8. Consider rectangle  $HJKM$  formed by four intersecting lines in the coordinate plane. One of which is  $\overleftrightarrow{HJ}$ , whose equation is:

$$y = \frac{1}{5}x + \frac{6}{5}$$

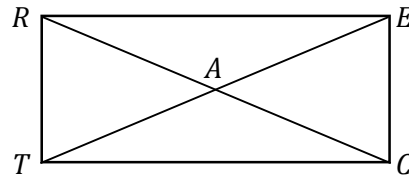
Find the equation of  $\overleftrightarrow{MH}$  given  $M(3, 7)$ .



9. Use the definition and the fact that we proved in the proof on page 749 of your text:  $\overline{RE} \parallel \overline{TC}$  to prove that: *The diagonals of a rectangle bisect each other.*

Given: Rectangle  $RECT$

Prove:  $\overline{RC}$  &  $\overline{TE}$  bisect each other



STATEMENTS

REASONS