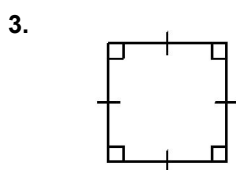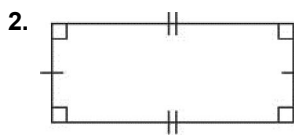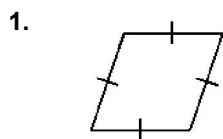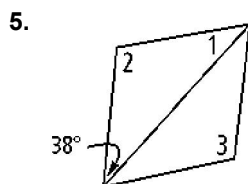# 6-4 Practice

Form K

Properties of Rhombuses, Rectangles, and Squares

Decide whether the parallelogram is a rhombus, a rectangle, or a square. Explain
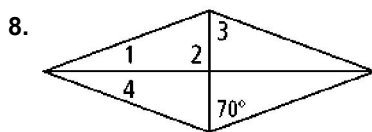
1.

2.

3.

4.

Find the measures of the numbered angles in each rhombus.

5.

To start, a diagonal of a rhombus forms an isosceles triangle with congruent base angles.

So, $m\angle \boxed{} = 38$.

38°

6.

73°

7.

106°

8.

70°

To start, the diagonals of a rhombus are perpendicular.

So, $m\angle \boxed{} = 90$.

9.

25°

10.

52°

6-4

Practice (continued)   *Form K*

Properties of Rhombuses, Rectangles, and Squares

Algebra *QRST* is a rectangle. Find the value of *x* and the length of
each diagonal.

11. $QS = x$ and $RT\ 5\ 6x - 10$

To start, write an equation to show the
diagonals are congruent.

$\underline{\ \ ?\ \ } = \underline{\ \ ?\ \ }$

12. $QS = 4x - 7$ and $RT = 2x + 11$ **13.** $QS = 5x + 12$ and $RT = 6x - 2$

14. $QS = 6x - 3$ and $RT = 4x + 19$ **15.** $QS = x + 45$ and $RT = 4x - 45$

Determine the most precise name for each quadrilateral.

16.

17.

18.

19.

**Determine whether each statement is *true* or *false*. If it is false, rewrite the
sentence to make it true. If it is true, list any other quadrilaterals for which
the sentence would be true.**

20. Rhombuses have four congruent sides.

21. Rectangles have four congruent angles.

22. The diagonals of a rectangle bisect the opposite angles.

23. The diagonals of a rhombus are always congruent.

Algebra Find the values of the variables. Then find the side lengths.

24.

Rhombus

25.

Square

6-4 Practice

Form K

Properties of Rhombuses, Rectangles, and Squares

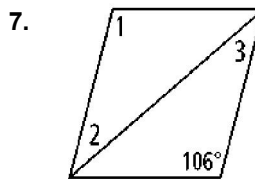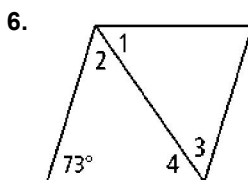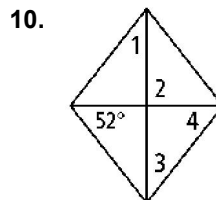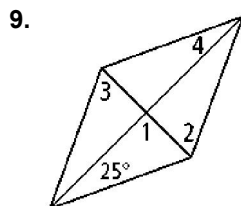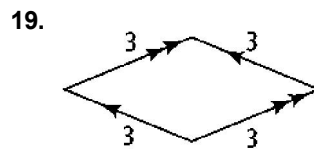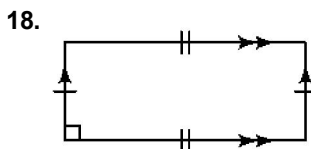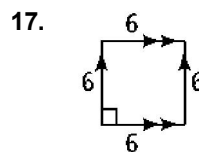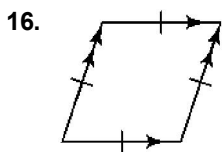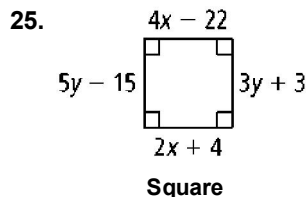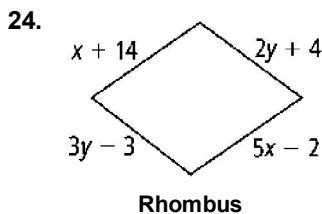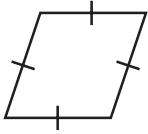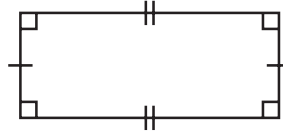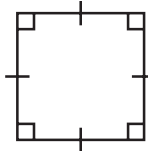**Decide whether the parallelogram is a rhombus, a rectangle, or a square. Explain.**

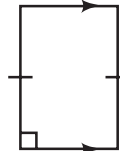**1.**

rhombus; four congruent sides, no right angles

2.

rectangle; opposite sides congruent, four right angles

3.

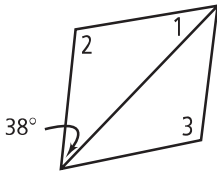**square; four right angles and four congruent sides**

4.

rectangle; right angles, opposite sides congruent

Find the measures of the numbered angles in each rhombus.

5.

38; 104; 104

To start, a diagonal of a rhombus forms an isosceles triangle with congruent base angles.

So, $m\angle\boxed{1} = 38$.

6.

73°
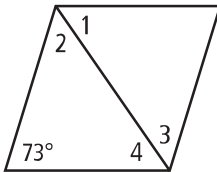
53.5; 53.5; 53.5; 53.5

7.

106°

106; 37; 37

8.

70°
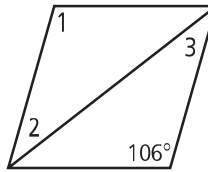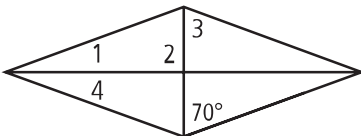
20; 90; 70; 20

To start, the diagonals of a rhombus are perpendicular.

So, $m\angle\boxed{2} = 90$.

9.
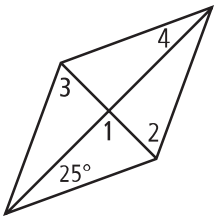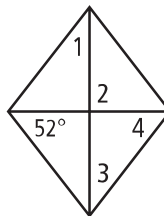
25°

90; 65; 65; 25

10.

52°

38; 90; 38; 52

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6-4 Practice (continued) Form K

Properties of Rhombuses, Rectangles, and Squares

Algebra *QRST* is a rectangle. Find the value of x and the length of each diagonal.

11. $QS = x$ and $RT = 6x - 10$ **2; 2** To start, write an equation to show the diagonals are congruent.
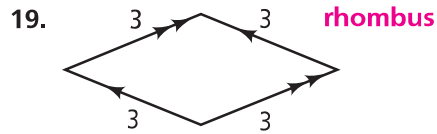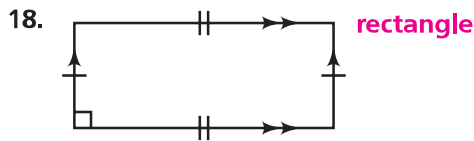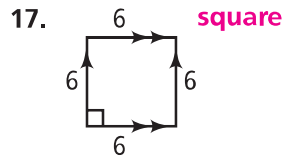
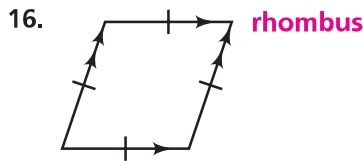$\underline{\quad?\quad} = \underline{\quad?\quad}$ **x; 6x − 10**

12. $QS = 4x - 7$ and $RT = 2x + 11$
 9; 29

13. $QS = 5x + 12$ and $RT = 6x - 2$
 14; 82

14. $QS = 6x - 3$ and $RT = 4x + 19$
 11; 63

15. $QS = x + 45$ and $RT = 4x - 45$
 30; 75

Determine the most precise name for each quadrilateral.

16. **rhombus**

17. **square**

18. **rectangle**

19. **rhombus**

Determine whether each statement is *true* or *false.* If it is false, rewrite the sentence to make it true. If it is true, list any other quadrilaterals for which the sentence would be true.

20. Rhombuses have four congruent sides. **true; squares**

21. Rectangles have four congruent angles. **true; squares**

22. The diagonals of a rectangle bisect the opposite angles. **False; the diagonals of a rhombus bisect the opposite angles.**

23. The diagonals of a rhombus are always congruent. **False; the diagonals of rectangles or squares are congruent, but not all rhombuses are rectangles or squares.**

Algebra Find the values of the variables. Then find the side lengths.

24. **4; 7; 18**

$x + 14$ $2y + 4$
$3y - 3$ $5x - 2$
Rhombus

25. **13; 9; 30**

$4x - 22$
$5y - 15$ $3y + 3$
$2x + 4$
Square