Assign Guided Practice exercises as necessary.

If you finished Examples 1–2:
- Basic 13–16, 24, 25, 28, 29, 31
- Average 13–16, 24, 25, 28, 29, 31, 37, 38
- Advanced 13–16, 24, 25, 28, 29, 31, 37–39

If you finished Examples 1–5:
- Basic 13–34, 40–42, 45, 47–49, 52–56
- Average 13–23, 24–32 even, 33–36, 38–42 even, 43–45, 47–49, 52–56
- Advanced 13–23, 28–32 even, 33, 35–42, 44–56

Homework Quick Check
Quickly check key concepts.
Exercises: 13, 14, 18, 20, 22, 28, 32

Answers
2. Possible answer: In a □, 2 pairs of opp. sides are ≅. In a kite, exactly 2 distinct pairs of cons. sides are ≅.
13. **Design** Each square section in the iron railing contains four small kites. The figure shows the dimensions of one kite. What length of iron is needed to outline one small kite? How much iron is needed to outline one complete section, including the square? About 56.6 in.; about 418.3 in. In kite $ABCD$, $m\angle DAX = 32^\circ$, and $m\angle XDC = 64^\circ$. Find each measure.

14. $m\angle XDA = 58^\circ$  
15. $m\angle ABC = 122^\circ$  
16. $m\angle BCD = 52^\circ$

Find each measure.

17. Find $m\angle Q$, 62°

18. $SZ = 62.6$, and $KZ = 34$. Find $RF$, 96.6

19. **Algebra** Find the value of $a$ so that $XYZW$ is isosceles. Give your answer as a simplified radical, $\pm 4\sqrt{5}$

20. **Algebra** $GF = 4x - 1$, and $FH = 9x - 15$. Find the value of $x$ so that $FGHJ$ is isosceles. 2.8

Tell whether each statement is sometimes, always, or never true.

21. The opposite angles of a trapezoid are supplementary. S

22. The opposite angles of a kite are supplementary. S

23. A pair of consecutive angles in a kite are supplementary. N

24. Estimation $n = \frac{m}{\sqrt{2}}$.

Find the measure of each numbered angle.

25. $m\angle 1 = 116^\circ$; $m\angle 2 = 46^\circ$

26. $m\angle 1 = 51^\circ$; $m\angle 2 = 16^\circ$

27. $m\angle 1 = 82^\circ$; $m\angle 2 = 128^\circ$

28. $m\angle 1 = 120^\circ$

29. $m\angle 1 = 117^\circ$

6-6 Properties of Kites and Trapezoids

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**Practice and Problem Solving**

**Common Error Alert**

In Exercises 27–32, students may not be sure how to begin solving the problem. Point out that they must first determine if the figure is a kite, a trapezoid, or an isosceles trapezoid. Then suggest that they redraw each figure, marking known properties for that type of quadrilateral.