LESSON 6.4

NAME _____ DATE _____

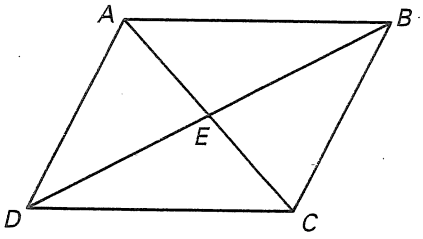
Practice B

For use with pages 347–355

Decide whether the statement is *sometimes, always,* or *never* true.

1. A rhombus is equilateral.
2. The diagonals of a rectangle are perpendicular.
3. The opposite angles of a rhombus are supplementary.
4. A square is a rectangle.
5. The diagonals of a rectangle bisect each other.
6. The consecutive angles of a square are supplementary.

Quadrilateral *ABCD* is a rhombus.



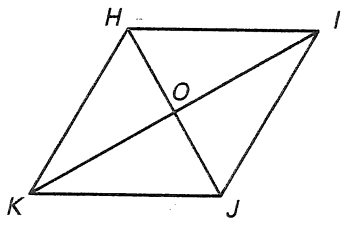
7. If $m\angle BAE = 32°$, find $m\angle ECD$.
8. If $m\angle EDC = 43°$, find $m\angle CBA$.
9. If $m\angle EAB = 57°$, find $m\angle ADC$.
10. If $m\angle BEC = 3x - 15°$, solve for x.
11. If $m\angle ADE = 5x - 8°$ and $m\angle CBE = 3x + 24$, solve for x.
12. If $m\angle BAD = 4x + 14°$ and $m\angle ABC = 2x + 10°$, solve for x.

It is given that *PQRS* is a parallelogram. Decide whether it is a rectangle, a rhombus, a square, or none of the above. Justify your answer using theorems about quadrilaterals.

13. $P(-2, 3)$, $Q(-2, -4)$, $R(2, -4)$, $S(2, 3)$
14. $P(7, -1)$, $Q(3, 6)$, $R(-1, -1)$, $S(3, -8)$
15. $P(-4, 0)$, $Q(3, 7)$, $R(6, 4)$, $S(-1, -3)$
16. $P(1, 1)$, $Q(-2, 4)$, $R(-5, 1)$, $S(-2, -2)$

Write a two-column or a paragraph proof.

17. **Given:** Parallelogram $HIJK$
$\triangle HOI \cong \triangle JOI$
Prove: $HIJK$ is a rhombus.



18. **Given:** Rectangle $RECT$
Prove: $\triangle ART \cong \triangle ACE$