

Skills Practice

Parallelograms

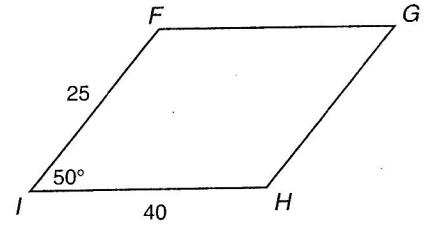
Find each measure.

1. $m\angle H$

2. $m\angle G$

3. GH

4. FG



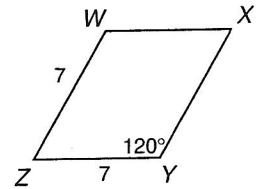
Find each measure.

5. $m\angle Z$

6. $m\angle W$

7. XY

8. WX



In the figure, $TQ = 42$ and $SA = 14$. Find each measure.

9. TA

10. $m\angle QST$

11. SR

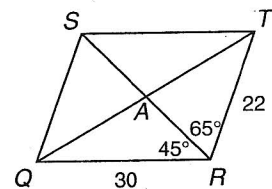
12. $m\angle STR$

13. SQ

14. ST

15. AQ

16. AR



17. In a parallelogram, the measure of one side is 38. Find the measure of the opposite side.

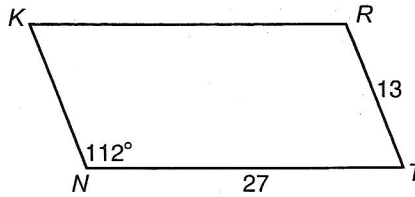
18. The measure of one angle of a parallelogram is 45. Determine the measures of the other three angles.

Practice

Parallelograms

Find each measure.

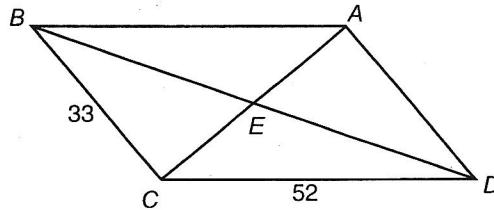
1. $m\angle K$
2. $m\angle R$
3. $m\angle T$
4. KR
5. KN



6. Suppose the diagonals of $\square KRTN$ intersect at point Y . If $NY = 12$, find NR .

In the figure, $BD = 74$ and $AE = 29$. Find each measure.

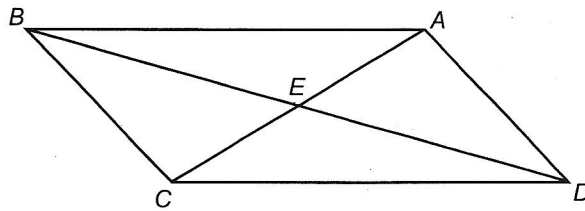
7. ED
8. EC
9. AC
10. BE
11. AD
12. BA



13. If $m\angle BCD = 125$, find $m\angle BAD$.

14. If $m\angle BAC = 45$, find $m\angle ACD$.

15. If $m\angle BEA = 135$, find $m\angle AED$.



16. If $m\angle ABC = 50$, find $m\angle BCD$.

Reading to Learn Mathematics

Parallelograms

Key Terms

parallelogram a quadrilateral with two pairs of parallel sides

Reading the Lesson

- Determine whether each of the following is a *correct* or *incorrect* statement of a geometric theorem. If the statement is incorrect, replace the underlined word to make the statement correct.
 - Opposite angles of a parallelogram are supplementary.
 - The diagonals of a parallelogram bisect each other.
 - The consecutive angles of a parallelogram are congruent.
 - A diagonal of a parallelogram separates it into two congruent quadrilaterals.
 - Opposite sides of a parallelogram are congruent.
- Let $ABCD$ be a parallelogram with $AB \neq BC$ and with no right angles.
 - Sketch a parallelogram that matches the description given above. Draw diagonal \overline{BD} .

In parts b-e, complete each sentence using your diagram.

- $\overline{AB} \parallel$ _____ and $\overline{AD} \parallel$ _____.
- $\overline{AB} \cong$ _____ and $\overline{BC} \cong$ _____.
- $\angle A \cong$ _____ and $\angle ABC \cong$ _____.
- $\triangle ABD \cong$ _____.

Helping You Remember

- To help you remember the theorems about parallelograms, sketch a parallelogram. Label the vertices and draw the diagonals. Now state the four things that are true by applying Theorems 8-2 through 8-5. State the number of each theorem as you use it.

Skills Practice

Tests for Parallelograms

Determine whether each quadrilateral is a parallelogram. Write yes or no. If yes, give a reason for your answer.

