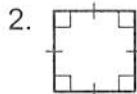


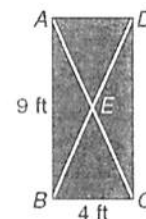
Additional Practice

Tell whether each figure must be a rectangle, rhombus, or square based on the information given. Use the most specific name possible.



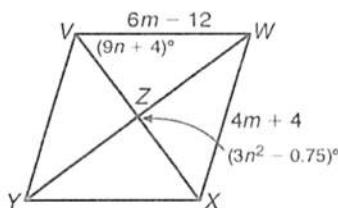
A modern artist's sculpture has rectangular faces. The face shown here is 9 feet long and 4 feet wide. Find each measure in simplest radical form. (Hint: Use the Pythagorean Theorem.)

4. $DC =$ _____ 5. $AD =$ _____
 6. $DB =$ _____ 7. $AE =$ _____



$VWXY$ is a rhombus. Find each measure.

8. $XY =$ _____
 9. $m\angle YVW =$ _____
 10. $m\angle VYX =$ _____
 11. $m\angle XYZ =$ _____

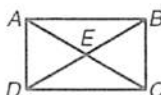


12. The vertices of square $JKLM$ are $J(-2, 4)$, $K(-3, -1)$, $L(2, -2)$, and $M(3, 3)$. Find each of the following to show that the diagonals of square $JKLM$ are congruent perpendicular bisectors of each other.

- $JL =$ _____ $KM =$ _____
 slope of $\overline{JL} =$ _____ slope of $\overline{KM} =$ _____
 midpoint of $\overline{JL} =$ (_____, _____) midpoint of $\overline{KM} =$ (_____, _____)

Write a paragraph proof.

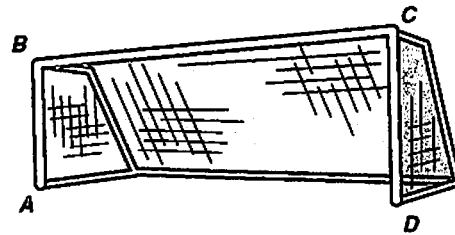
13. **Given:** $ABCD$ is a rectangle.
Prove: $\angle EDC \cong \angle ECD$



Problem Solving

Use the diagram for Exercises 1 and 2.

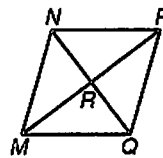
The soccer goalposts determine rectangle $ABCD$.



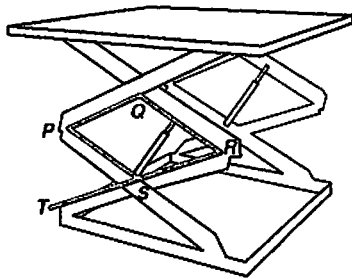
- The distance between goalposts, BC , is three times the distance from the top of the goalpost to the ground. If the perimeter of $ABCD$ is $21\frac{1}{3}$ yards, what is the length of \overline{BC} ?

- The distance from B to D is approximately $(x + 10)$ feet, and the distance from A to C is approximately $(2x - 5.3)$ feet. What is the approximate distance from A to C ?

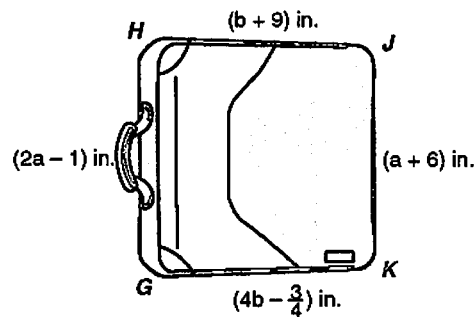
- $MNPQ$ is a rhombus. The measure of $\angle MRQ$ is $(13t - 1)^\circ$, and the measure of $\angle PQR$ is $(7t + 4)^\circ$. What is the measure of $\angle PQM$?



- The scissor lift forms rhombus $PQRS$ with $PQ = (7b - 5)$ meters and $QR = (2b - 0.5)$ meters. If S is the midpoint of \overline{RT} , what is the length of \overline{RT} ?

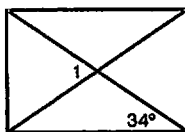


- The diagram shows the lid of a rectangular case that holds 80 CDs. What are the dimensions of the case?



Choose the best answer.

- What is the measure of $\angle 1$ in the rectangle?



- | | |
|--------------|---------------|
| A 34° | C 90° |
| B 68° | D 146° |

- A square graphed on the coordinate plane has a diagonal with endpoints $E(2, 3)$ and $F(0, -3)$. What are the coordinates of the endpoints of the other diagonal?

- | |
|---------------------------|
| F $(4, -1)$ and $(-2, 1)$ |
| G $(4, 0)$ and $(-2, 1)$ |
| H $(4, -1)$ and $(-3, 1)$ |
| J $(3, -1)$ and $(-2, 1)$ |