

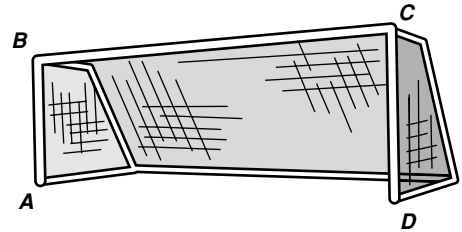
**LESSON**

**Problem Solving**

**6-4 Properties of Special Parallelograms**

Use the diagram for Exercises 1 and 2.

The soccer goalposts determine rectangle  $ABCD$ .



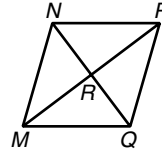
- The distance between goalposts,  $BC$ , is three times the distance from the top of the goalpost to the ground. If the perimeter of  $ABCD$  is  $21\frac{1}{3}$  yards, what is the length of  $BC$ ?

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- 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  $C$ ?

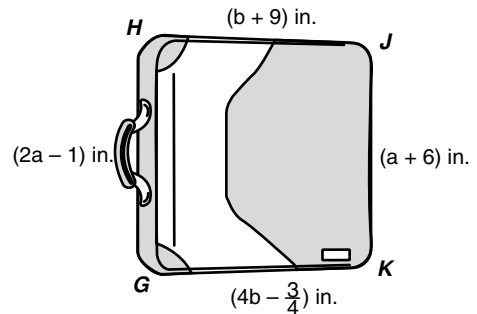
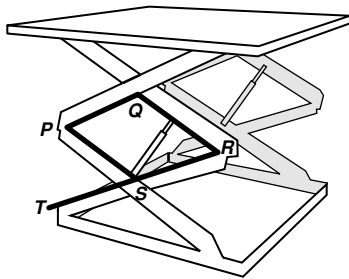
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- $MNPQ$  is a rhombus. The measure of  $\angle MRQ$  is  $(13t - 1)^\circ$ , and the measure of  $\angle PQR$  is  $(7t + 4)^\circ$ . What is the measure of  $\angle PQM$ ?



- 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  $\overline{RT}$ ?

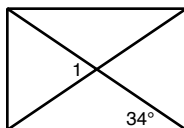
- The diagram shows the lid of a rectangular case that holds 80 CDs. What are the dimensions of the case?



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Choose the best answer.

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



- A  $34^\circ$                       C  $90^\circ$   
 B  $68^\circ$                       D  $146^\circ$

- 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  $(-2, 1)$