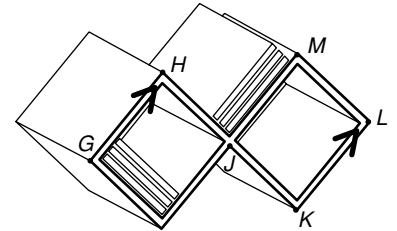


LESSON
3-4 **Problem Solving**
Perpendicular Lines

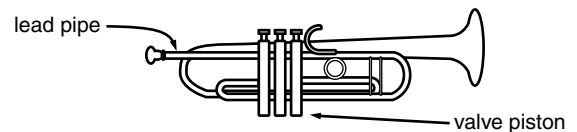
A wall rack for holding CDs is shown. Use the figure for Exercises 1 and 2.

1. Explain why \overline{HK} must be perpendicular to \overline{KL} .

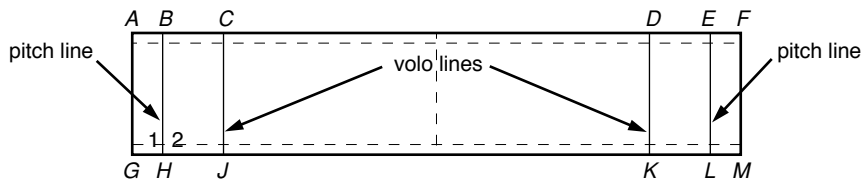


2. If $\overline{JM} \perp \overline{HK}$, explain why $\overline{JM} \parallel \overline{GH}$.

3. The valve pistons on a trumpet are all perpendicular to the lead pipe. Explain why the valve pistons must be parallel to each other.



Use the diagram of a bocce court for Exercises 4 and 5.
Choose the best answer.



4. If $m\angle 1 = m\angle 2$, what can you conclude?
- A** $\overline{BH} \perp \overline{GJ}$ **C** $\overline{BH} \parallel \overline{CJ}$
B $\overline{AC} \perp \overline{BH}$ **D** $\overline{AC} \parallel \overline{GJ}$
5. The pitch lines are parallel, and the first pitch line is perpendicular to the long sides of the court. Which is a correct conclusion?
- F** $BH = CJ$ **H** $\overline{EL} \perp \overline{AF}$
G $\overline{BH} \parallel \overline{CJ}$ **J** $\overline{DK} \perp \overline{AF}$