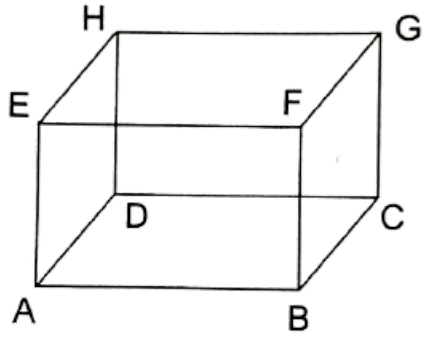
Geometry #6: Parallel, Perpendicular, and All That

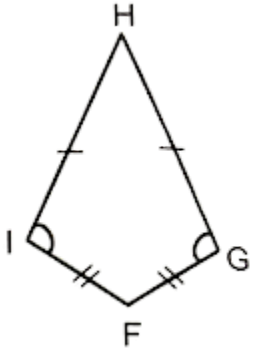
Big Idea



1. Identify 3 segments parallel to $\overline{EA}$.
2. Identify 4 segments perpendicular to $\overline{BC}$.
3. Identify 4 segments skew to $\overline{HD}$.
4. Identify 1 plane parallel to plane EFG
5 Identify 4 planes perpendicular to plane

6. Which parts of the accompanying figure are congruent?

(1) $\overline{HI} \cong \overline{HG}$, $\angle I \cong \angle G$, and $\angle H \cong \angle F$
(2) $\overline{HI} \cong \overline{HG}$, $\overline{IF} \cong \overline{FG}$, and $\angle I \cong \angle G$
(3) $\overline{HI} \cong \overline{IF}$, $\overline{HG} \cong \overline{FG}$, and $\angle I \cong \angle G$
(4) $\overline{IF} \cong \overline{FG}$ and $\angle H \cong \angle F$



7. $\overleftrightarrow{MN}$ and $\overleftrightarrow{JK}$ intersect at point L. Which of the following is not true?

(1) Points J, K, and M are collinear.
(2) $\overleftrightarrow{MN}$ and $\overline{JK}$ are coplanar.
(3) Points J, K, and L are collinear.
(4) Points J, K, L, and M are coplanar.