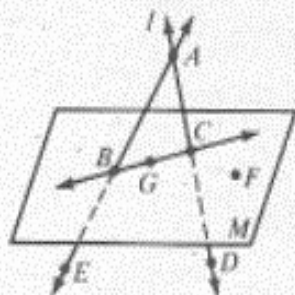


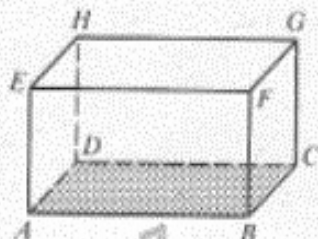
Classify each statement as true or false.

- $\overrightarrow{BC}$  is in plane  $M$ . **true**
- Plane  $M$  contains  $\overrightarrow{AB}$ . **false**
- Line  $l$  intersects  $\overrightarrow{AB}$  at point  $B$ . **false**
- $\overrightarrow{AB}$  and  $\overrightarrow{DA}$  intersect at  $A$ . **true**
- $\overrightarrow{AD}$  is in plane  $M$ . **false**
- Plane  $M$  intersects  $\overrightarrow{AE}$  at point  $B$ . **true**
- $\overrightarrow{AE}$  intersects plane  $M$  at point  $B$ . **true**
- $A, B,$  and  $E$  are collinear. **true**
- $A, B,$  and  $C$  are coplanar. **true**
- $A, B, C,$  and  $G$  are coplanar. **true**
- $B, F,$  and  $D$  are collinear. **false**
- $B, C, F,$  and  $G$  are coplanar. **true**
- $A, B, C,$  and  $F$  are coplanar. **false**



The plane that contains the shaded region can be called plane  $ABCD$ . Answers may vary.

- Name three lines that intersect at point  $G$ .  $\overrightarrow{HG}, \overrightarrow{CG}, \overrightarrow{FG}$
- Name two planes whose intersection is  $\overrightarrow{FB}$ .  $EFBA, FGCB$
- Name the intersection of plane  $EHGF$  and plane  $EFBA$ .  $\overrightarrow{EF}$
- Name two planes that do not intersect.  $ABCD, EFGH; FGCB, EHDA; HGCD, EFBA$
- Are points  $D, H, G,$  and  $C$  coplanar? **yes**
- Are points  $D, H, G,$  and  $F$  coplanar? **no**
- Are points  $A, B, G,$  and  $H$  coplanar? **yes**



Sketch and label the figures described. Use dashes for parts hidden from view. See Additional Answers.

- Line  $\overrightarrow{AB}$  intersects plane  $X$  at point  $C$ .
- Two planes  $M$  and  $N$  intersect in line  $l$ .
- Horizontal plane  $P$  contains two lines  $\overrightarrow{RS}$  and  $\overrightarrow{TU}$  that intersect at point  $O$ .

