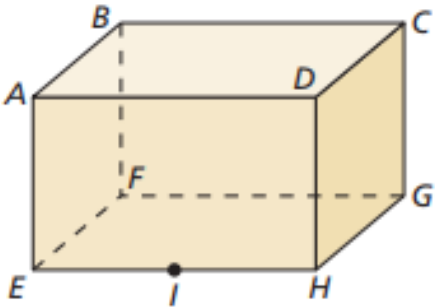


HW #3-1

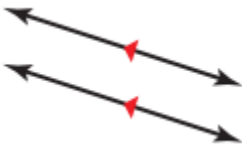
1. The figure shows a *right rectangular prism*. All its angles are right angles. Classify each of the following pairs of lines as parallel, perpendicular, intersecting, coincident, or skew.
(Two lines are *skew* when they do not intersect and are not coplanar.)
(Two lines are *coincident* when they represent the same line)

- a. $\overleftrightarrow{AB}$ and $\overleftrightarrow{BC}$
- b. $\overleftrightarrow{AD}$ and $\overleftrightarrow{BC}$
- c. $\overleftrightarrow{EI}$ and $\overleftrightarrow{IH}$
- d. $\overleftrightarrow{BF}$ and $\overleftrightarrow{EH}$
- e. $\overleftrightarrow{EF}$ and $\overleftrightarrow{CG}$
- f. $\overleftrightarrow{AB}$ and $\overleftrightarrow{GH}$



2. Write the number of points of intersection of each pair of coplanar lines.

a. Parallel lines



b. intersecting lines

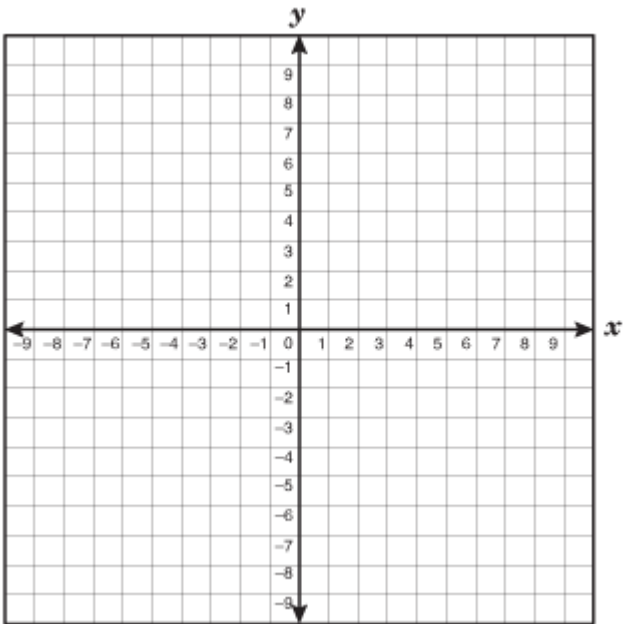


c. coincident lines

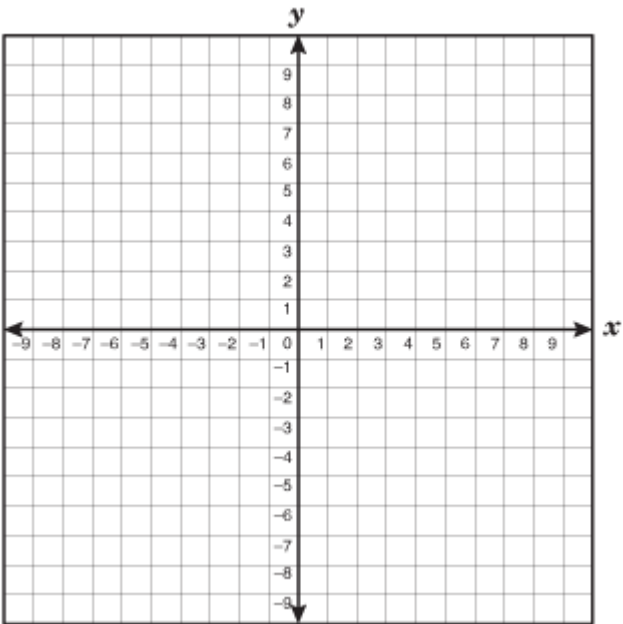


3. Graph the lines. Classify the lines as parallel, perpendicular, coincident, or non-perpendicular intersecting lines.

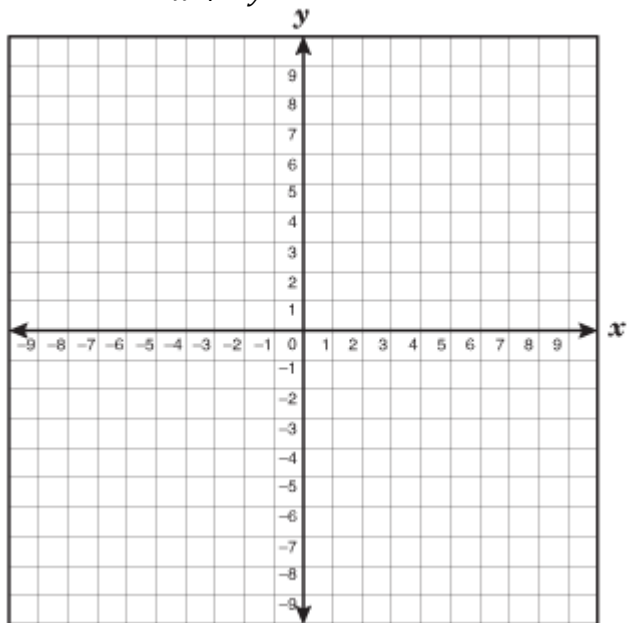
a. $x + 2y = 2$
 $2x - y = 4$



b. $x + 2y = 2$
 $2x + 4y = 4$



c. $x + 2y = 2$
 $x + 2y = -2$



d. $x + 2y = 2$
 $x - y = -4$

