Name _____ Date _____ Class _____

Problem Solving
1-1 *Understanding Points, Lines, and Planes*

Use the map of part of San Antonio for Exercises 1 and 2.

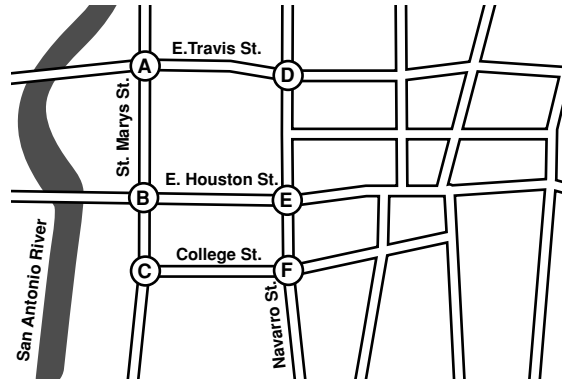**1.** Name a point that appears to be collinear with $\overline{EF}$. Which streets intersect at this point?

Solution:

Find point *E* and point *F*. Extend that line.

Point *D* also lies on that line.

2. Explain why point *A* is NOT collinear with $\overline{BE}$.

_____ St. runs through point *B* and point *E*

Point A _____ lie on this street, so it is not collinear with $\overline{BE}$.

3. Two skateboarders start at point C. One travels on St. Mary's St. and one travels on College St. If each continues in the same direction, how many times will they meet again? Explain

_____

_____

Choose the best answer.

4. In a building, planes $\mathcal{W}$, $\mathcal{X}$, and $\mathcal{Y}$ represent each of the three floors; planes $\mathcal{Q}$ and $\mathcal{R}$ represent the front and back of the building; planes $\mathcal{S}$ and $\mathcal{T}$ represent the sides. Which is a true statement?

A Planes $\mathcal{W}$ and $\mathcal{Y}$ intersect in a line.

B Planes $\mathcal{Q}$ and $\mathcal{X}$ intersect in a line.

C Planes $\mathcal{Q}$, $\mathcal{R}$, and $\mathcal{S}$ intersect in a point.

Use the figure for Exercise 5.

5. A frame holding two pictures sits on a table. Which is NOT a true statement?

F $\overline{PN}$ and $\overline{NM}$ lie in plane $\mathcal{T}$.

G $\overline{PN}$ and $\overline{NM}$ intersect in a point.

H $\overline{LM}$ and *N* intersect in a line.