

**Activity Lesson Opener**

For use with pages 642–648

**SET UP: Work in a group.****YOU WILL NEED:** • number cube • rulers

**Assign the roles of Artist, Roller, and Writer to members of your group. All group members will be Players. The object of the game is to find all the points in a plane that satisfy a given condition. Follow the steps below to play the game.**

- The Artist prepares a game board by drawing the figure.  
(In Game 1, the figure is Point  $C$ .)
- The Roller rolls a number cube to determine the lucky number.
- The first Player rolls the number cube. The number that lands up is the number of points the Player must draw on the game board. Each point must satisfy the given condition. (In Game 1, a Player who rolls a “4” draws 4 points that are 8 cm from  $C$ .)
- Players take turns rolling the cube and drawing points.
- The Player who rolls the lucky number must draw all points that satisfy the given condition. If the group agrees on this drawing, the Player wins. If not, play continues until someone wins.
- The Writer writes a sentence to describe the set of all points that satisfy the given condition, and the game is over.
- Switch roles for the next game.

**Game 1** Figure: Point  $C$   
Points: 8 cm from  $C$

**Game 2** Figure: Point  $C$   
Points: Less than 8 cm from  $C$

**Game 3** Figure: Line  $k$   
Points: 2 inches from  $k$

**Game 4** Figure: Parallel lines  $m$  and  $n$   
Points: Equidistant from  $m$  and  $n$

**Game 5** Figure: Points  $A$  and  $B$   
Points: Equidistant from  $A$  and  $B$