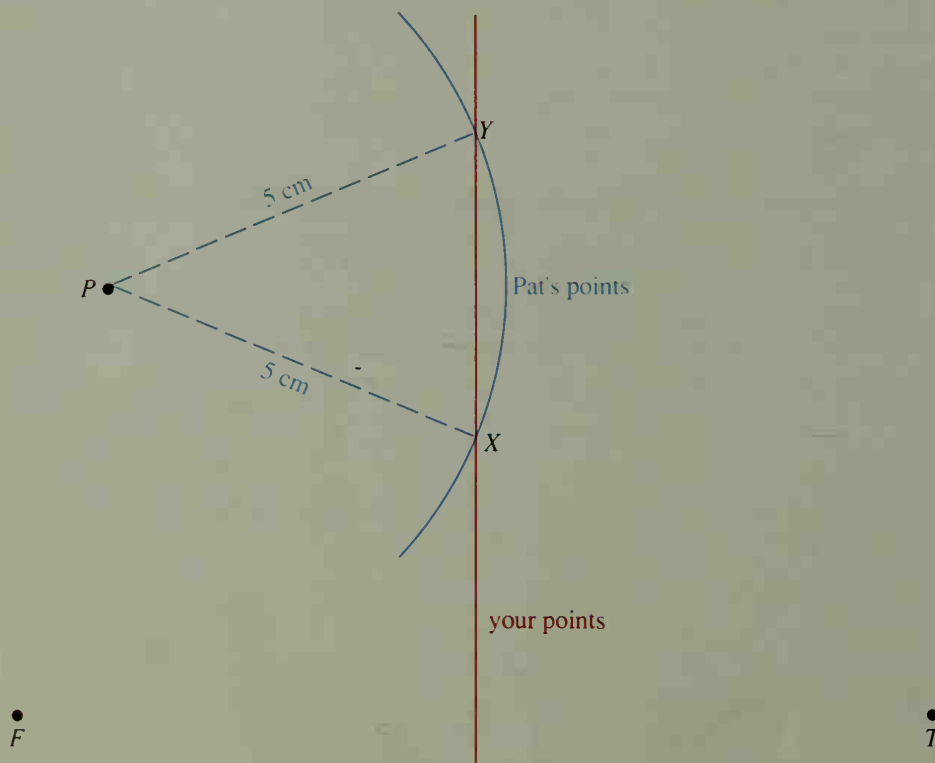


Suppose that you concentrate on points that satisfy requirement 1 while Pat works on points that meet requirement 2. In the diagram below, 1 cm represents 2 m, so the blue arc shows points that are 10 m from the pole. Each red point is equally distant, or *equidistant*, from F and T . Point Y , as well as X , meets both requirements. You and Pat find your clue at Y and proceed with the game.



The game discussed above involves *points* and *distances*. When you approach the game systematically, you use *lines* and *circles*. Understanding the properties of geometric figures like these is an important part of geometry. The rest of this chapter will deal with the most basic figures of geometry.

Classroom Exercises

For Exercises 1–8 refer to the diagram above.

1. Suppose that the diagram showed, in blue, *all* the points that are 5 cm from P . What geometric figure would the points form?
2. In a more complete diagram, would there be a red point 15 cm from both F and T ? How many such points?
3. It appears as if points P , X , and T might lie on a straight line. Use a ruler or the edge of a sheet of paper to see if they do.