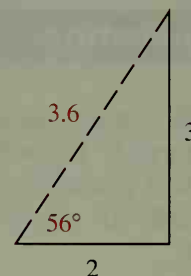


Sometimes you may want to change from one system to the other. For example, if you were at the town center and walked two blocks east and three blocks north, what would your position be in the distance-angle system? Use a centimeter ruler and draw the triangle suggested by your path. If you measure the triangle, you will get about $(3.6, 56^\circ)$.



Exercises

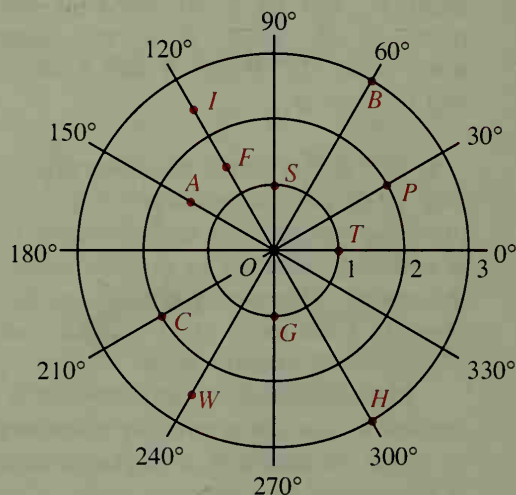
- Copy the grid system shown on the previous page onto a piece of graph paper. Then locate the following points.
 - A point T five blocks due west of the center of town
 - A point U five blocks east and two blocks south of the center of town
 - A point V two blocks west and one block north of your house, which is located at point P

- Give the letter that names each point.

- $(2, 30^\circ)$
- $(2.5, 120^\circ)$
- $(1, -90^\circ)$

- Give the distance and angle for each point.

- C
- A
- T



- Give another way of naming each point.

- $(1, -120^\circ)$
- $(2, 300^\circ)$
- $(2.5, -180^\circ)$

- A point is given in the grid system. What would it be called in the distance-angle system? (*Hint:* See the discussion at the top of the page. Use a protractor and a centimeter ruler to help you answer the question.)

- $(3, 4)$
- $(-2, 5)$
- $(4, 0)$
- $(8, -6)$

- A point is given in the distance-angle system. What would it be called, approximately, in the grid system? (*Hint:* Use a protractor and a centimeter ruler to draw the triangle suggested by the angle and distance. Measure the sides of the triangle.)

- $(2, 50^\circ)$
- $(1.5, -70^\circ)$
- $(3, 90^\circ)$
- $(1, 120^\circ)$