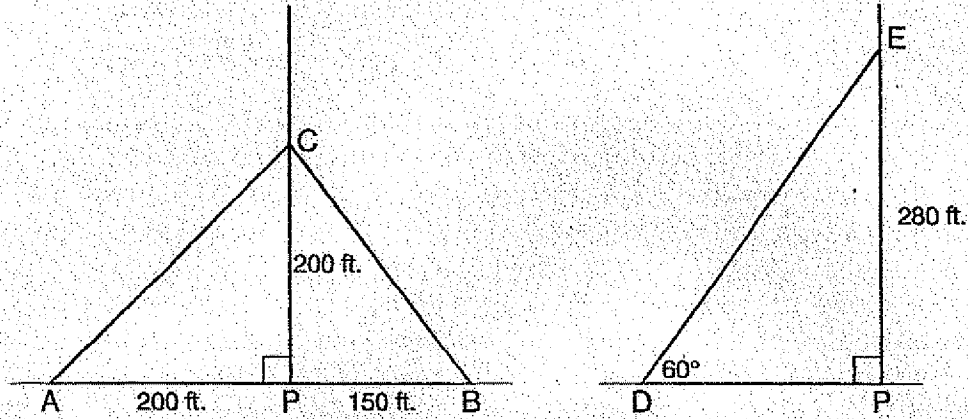


E

57. Deering & Sons is a company specializing in the installation of guy wires for antennas. The diagrams below are for their two new orders.



The first diagram shows that the two guy wires represented by \overline{AC} and \overline{BC} are to be attached to the antenna at a height of 200 feet and are to be attached to the ground at a distance from the antenna of 200 feet and 150 feet respectively. The second diagram shows a third guy wire represented by \overline{DE} that is to be attached at a height of 280 feet, making an angle of 60° with the ground. The ground surrounding the antenna is level.

- How long will the guy wire be from point A to point C? Show or explain how you found your answer.
- How long will the guy wire be from point B to point C? Show or explain how you found your answer.
- How long will the guy wire be from point D to point E? Show or explain how you found your answer.
- What will be the distance from point D to the base of the antenna, point P? Show or explain how you found your answer.

(See next page for answer space.)