

ground. Draw a diagram to represent this and find the width of the street.

5. On a line BC , 48 feet long, describe first a triangle ABC having the angles at B and C 48° and 54° respectively; and secondly, a square $BDEC$ on the other side of BC . Find the distance of A from each corner of the square.

6. On the scale of 100 feet to an inch draw the plan of a plot of land, $ABCDE$, bounded as follows: From A to B 456 feet, thence 80° to the right 316 feet to C , thence 50° to the right 278 feet to D , thence 65° to the right 509 feet to E , thence to the point of commencement at A . Find the lengths of AE , AD , and AC , and the internal angles at A and E ; and, by drawing perpendiculars from the vertex to the base of each triangle, find the area in square feet of the whole plot. (*C*, 1898.)

NOTE. See note under exercise 20, page 44.

7. Draw a rhombus 20 feet on a side, the length of the longer diagonal being 32 feet. Find the length of the other diagonal, and the area of the rhombus.

8. To measure the height of a flagstaff standing on the top of a building a man proceeded thus: At a certain point on the ground he measured the angle of elevation of the top of the staff and found it to be 47° . He then walked 100 feet directly towards the building, and at the point reached measured the angles of elevation of the tops of the staff and building, and found them to be 82° and 71° respectively. How long was the staff?

9. Draw a regular pentagon on a base of 40 feet.