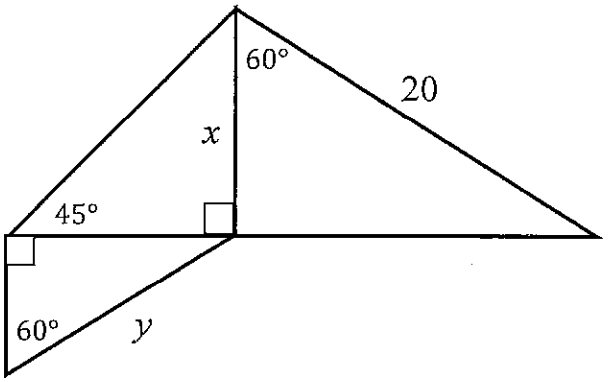
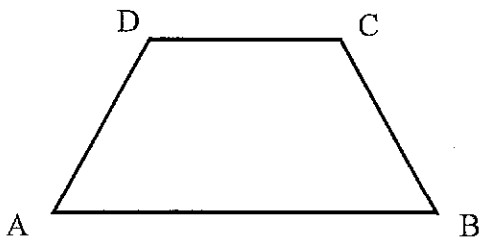
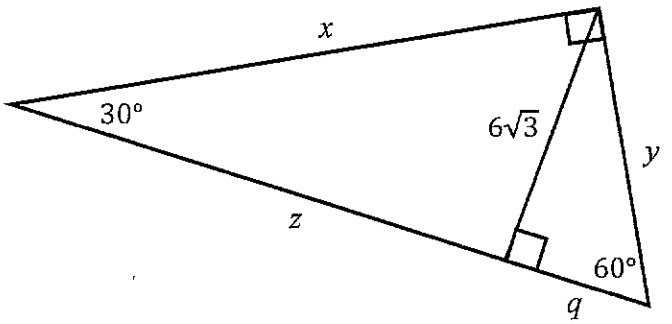
1. Find x and y.



2. The lower base angles in the isosceles trapezoid each measure 45°. The length of the shorter base is 10 inches and the altitude is 8 inches. Find the length, in inches, of the longer base.



3. Given the picture below, find the lengths of the segments labeled x, y, z and q.



4. A man is walking his dog on level ground in a straight line with the dog's favorite tree. The angle of elevation from the man's present position to the top of a nearby telephone pole is 30°. The angle of elevation from the tree to the top of the telephone pole is 45°. If the telephone pole is 40 feet tall, how far is the man with the dog from the tree? Express answer to the nearest tenth of a foot.