

1. Two equal sides of an isosceles triangle are each 42 cm. If the base measures 30 cm, find the height and the measure of the two equal angles.
2. How long should an escalator be if it is to make an angle of 33° with the floor and carry people a vertical distance of 21 feet between floors?
3. If the angle of elevation of the sun is 63.4° when a building casts a shadow of 37.5 feet, what is the height of the building?
4. From a point on the floor the angle of elevation to the top of a door is 47° , while the angle of elevation to the ceiling above the door is 59° . If the ceiling is 10 feet above the floor, what is the vertical dimension of the door?
5. A ship is anchored off a long straight shoreline that runs north and south. From two observation points 15 miles apart on shore, the bearings of the ship are N 31° E and S 53° E. What is the shortest distance from the ship to the shore?