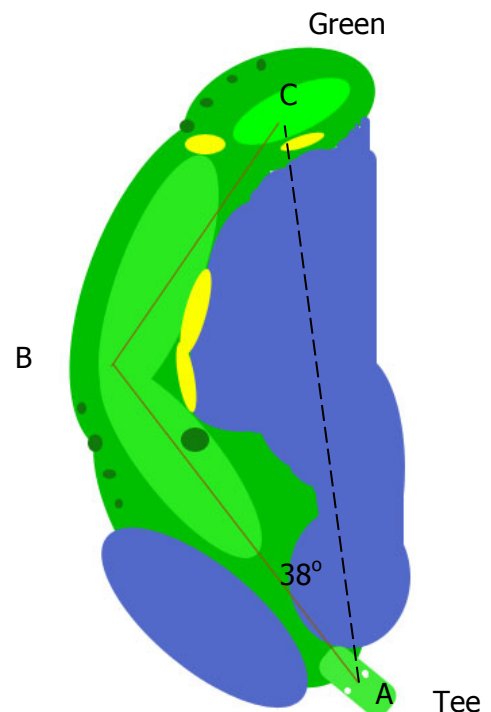


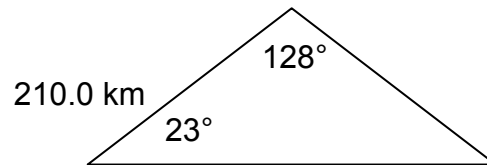
Applications of Sine Law and Cosine Law

Homework Worksheet

1. The following map represents a golf hole with a large water hazard between the tee and the green. A golfer briefly considers aiming directly for the green on the first shot (along the dashed line), then decides to take a more cautious approach instead and hits a 210 yard drive 38° to the west of AC. The second shot travels 150 yards from B to C before landing on the green. Determine the distance that would have been required to hit the ball directly from the tee to the green (along the dashed line).



2. The largest iceberg on record was an Antarctic iceberg with a surface area of $31\,000\text{ km}^2$. The approximate shape of the iceberg is shown. Calculate the width of the southern shore.



3. The largest known crater is in northern Arizona. It is approximately 1500 m wide. From one side of the crater a weather plane is spotted with an angle of elevation of 45° . From the opposite side of the crater, the angle of elevation of the plane is 64° . Calculate the distance from the plane to each side of the crater.