

Chapter 3- Acute Triangle Trigonometry

Lesson 5- 3.3 Applying the Cosine Law

Goal: Apply the cosine law to 'real world problems'

Example #1: At Science World, there is a giant pendulum on display. The line is 30 feet long, and when the pendulum swings from side to side, the horizontal distance it travels is 8 ft. Determine the angle through which the pendulum swings. Round your answer to the nearest degree.

Mary is orienteering across a large flat plain from Marker A to Marker B which are 4 miles apart. After walking 1.8 miles she realizes she is 6° off-course. To the nearest tenth of a mile, how far from Marker B is she when she realizes her error?

On a map the distance from Saint John to Bathurst is 262.6 kilometers. The distance from Saint John to Moncton is 135.5 kilometers. If the angle created by these lines at Saint John is 40.35° what must the distance from Moncton to Bathurst be?