

Quiz No. 01 (2014 Summer)

PHYS 203A: College Physics

Date: 2014 Jun 12

(Name)

(Signature)

1. (10 points.) Convert 10 m^2 to cm^2 .
2. (10 points.) A roller coaster travels 41.1 m at an angle of 40.0° above the horizontal. How far does it move horizontally and vertically?
3. (10 points.) You would like to know the distance to an island I from the shore of the beach. You first find the point A , on the beach, directly across from the island I . See Fig. 1. You then walk 200 m along the shore to point B . You measure $\angle IBA$ to be 80° . Determine the distance of the island from the beach?

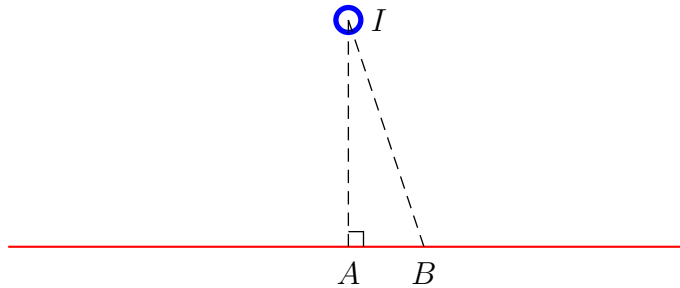


Figure 1: Problem 3

4. (10 points.) Vectors \vec{A} , \vec{B} , and \vec{C} , satisfy the vector equation $\vec{A} + \vec{B} = \vec{C}$, and their magnitudes are related by the scalar equation $A^2 + B^2 = C^2$. How is vector \vec{A} oriented with respect to vector \vec{B} ? Select the correct answer below.
 - (a) Vectors \vec{A} and \vec{B} must point in the same direction.
 - (b) Vectors \vec{A} and \vec{B} must be at right angles to each other.
 - (c) Vectors \vec{A} and \vec{B} must point in the opposite directions.