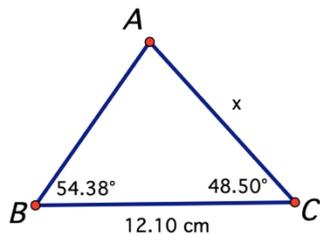
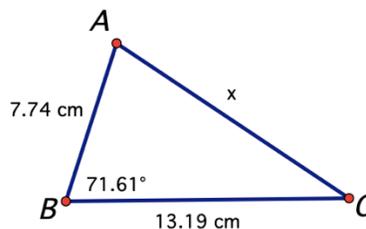


PC-6 Review**C-Level****1) Solve for x. [13 pts]****2) Solve for x. [13 pts]****3) A boat leaves port on a heading of $N50^\circ W$ traveling at 14 knots for 8 hours. The boat then turns to a heading of $S10^\circ W$ traveling at 16 knots for 5 hours. [12 pts]****a) Draw a diagram of the boat's path.****b) Determine how far the boat is from where it left port.****A/B-Level****4) Two sensors are spaced 700 feet apart along the approach to a small airport. When an aircraft is nearing the airport, the angle of elevation from the first sensor to the aircraft is 20° , and that from the second sensor is 15° . Determine how high the aircraft is at this time. [4 pts]**

A/B-Level

- 5)** A cruise ship leaves Astoria, Oregon on a direct trip to Honolulu, Hawaii, which is 2,232 nautical miles (NM) away. The cruise ship captain travels off the direct course by 20° traveling at 28 knots for 18 hours due to a typhoon in the Pacific ocean. [4 pts]
- a)** Draw a diagram given the description
 - b)** How far is the cruise ship from Astoria after 18 hours?
 - c)** Through what angle should the cruise ship turn to correct it's course?
 - d)** How much time has been added to the trip because of this? (Assume the speed remains 28 knots).

- 6)** A boat leaves port on a heading of $S22^\circ W$ traveling at 17 knots for 4 hours. The boat then turns to a heading of $S42^\circ E$ traveling at 18 knots for 5 hours. [4 pts]
- a)** Draw a diagram of the boat's path.
 - b)** Determine how far the boat is from where it left port.
 - c)** What is the heading from port to the location of the boat after 9 hours?
 - d)** If the ending location of the boat is referred to as point C, how much time would be saved by traveling straight from port to point C traveling at 16 knots?