Answer on Question #70179 – Math – Geometry

Question

Pythagorean theorem Question

1. A hapless motorist is trying to find his friend's house, which is located 2.50 miles west of the intersection of State Street and First Avenue. He sets out from the intersection, and drives the same number of kilometers due south instead. How far in kilometers is he from his intended destination?

Solution

The west is perpendicular to the south, so it will be the right triangle (also note that 1 mile = 1.60934 km):

$$X = \sqrt{(2.5 \times 1.60934)^2 + 2.5^2} = \sqrt{22.4373} = 4.7368 \text{ km}$$

Answer: 4.7368 km.