UCONN -- Math 1011Q

Group Work on Pythagoras Theorem: Run Fido, Run!

1. As you sit at your desk in your office, you lean back as far as possible to balance your chair on its rear two legs. The chair's back is 5 feet tall, and the office's wall is 3 feet away from the rear legs of the chair. How high up on the wall will your chair leave a scratch mark? First draw a picture, then solve the problem.

2. You are still sitting in your office on the 6th floor (about 72 feet above the ground) when you smell smoke. Can the fire truck that is parked 50 feet away from the building reach you with its 100 foot ladder? First draw a picture, then solve the problem.

3. Now that you are safely out of the building, you decide to head home. When you get 200 feet from your house, you notice a low flying plane that almost hit the top of the 120 foot maple tree that is next to your house. How far away (up at an angle) are you from the plane? First draw a picture, then solve the problem.

4. As you go to open your front door you realize that it wasn't a plane at all: it was a UFO! and now it is hovering over Fido's dog house (which is 7 feet away from the main house). You estimate that the ship is about 25 feet away from you (up at an angle). Will the ship's 20 foot tractor beam be able to beam up Fido? First draw a picture, then solve the problem.

Run Fido, Run!!!