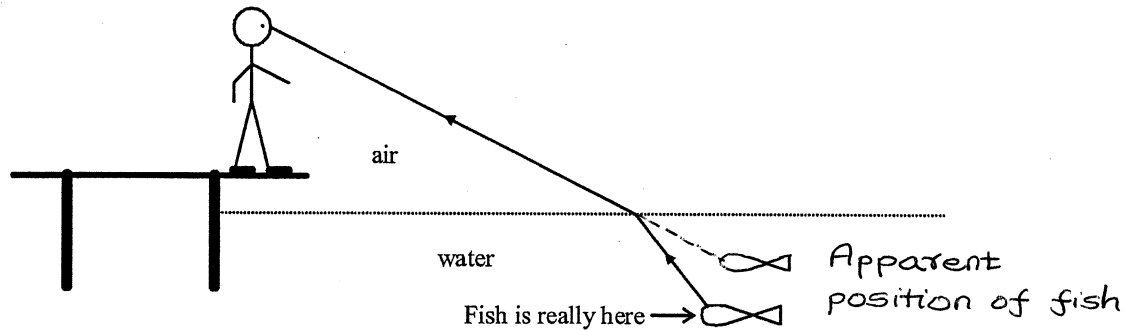


PHY 212 General Physics II - Electricity, Magnetism and Light
Summer 2007

Quiz 8 Tuesday, Aug 07

Name: WORKED OUT COPY

1. You are standing on the dock near to a lake. You spot a tasty fish swimming some distance below the lake surface.



(i) (5 points) On the diagram for this question, draw the fish in the location where it appears to be, as seen by you on the dock.

(ii) (5 points) Assume you are fishing with a bow and arrow. Should you shoot the arrow directly at where the fish appears to be, or in front or behind where the fish appears to be? *Method*: Draw the path taken by a light ray that leaves the fish and enters your eye (in the diagram above!). Then extend that light ray back into the water to see where the arrow will go if you aim where the fish appears to be.

(iii) (5 points) Suppose that, instead of using a bow and arrow to shoot the fish, you use a high-power laser beam to simultaneously kill and cook the fish. How should you aim the laser in order that the laser beam will hit the fish? Directly at where the fish appears to be, or in front or behind where the fish appears to be?