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1) ${ }^{6}$ A fish sees the sun $35^{\circ}$ from vertical. What is the actual position (angle from the vertical) of the sun in the sky? Draw the ray from the fish to the sun and the sun in its actual position.

2) ${ }^{2}$ What is the critical angle for the fish and is it in the air or the water?
$3)^{2} \mathrm{QB}$ is sitting 1 m in front of a plane mirror. Where does she see her image and is it real or virtual?
a) 1 m in front of the mirror, real
b) 0.5 m in front of the mirror, real
c) 1 m behind the mirror, virtual
d) 0.5 m behind the mirror, virtual

