The Moon as a Black Hole!

Suppose that a group of hostile aliens passed through our solar system and decided to convert our moon into a black hole!

A body with the mass of our moon (about 7 million trillion tons!) would be compressed into a black hole with a diameter of only 0.2 millimeters!

Problem 1 – In the space below, draw a black disk 0.2 millimeters in diameter to represent the size of Black Hole Moon.

Problem 2 - The Earth as a black hole would have a radius of 8.7 millimeters. In the space below, draw a circle the size of Black Hole Earth.

Problem 3 - If the distance to the moon is 356,000 kilometers, how far from our Black Hole Earth would the new Black Hole Moon be located if its diameter were only 0.2 millimeters?
Problem 1 - Moon black hole shown as the following dot .

Problem 2 - Earth black hole shown above. It has a diameter of 17 millimeters, or about the same diameter as a dime.

Problem 3 - Answer: It would still be 356,000 kilometers because this is NOT a scaled drawing of the black holes sizes, but an illustration of their actual sizes, so the distance between the black disks above would be 356,000 kilometers!