4. When S is barely able to see B the light rays from B must reflect to S off the edge of the mirror. The angle of reflection in this case is 45°, since a line drawn from S to the mirror's edge makes a 45° angle relative to the wall. By the law of reflection, we find

$$\frac{x}{d/2} = \tan 45° \Rightarrow x = \frac{d}{2} = \frac{3.0\,\text{m}}{2} = 1.5\,\text{m}.$$