1. We know the definition of centripetal acceleration in terms of the speed and radius, and both are given.

$$a_c = v^2 / r$$

$$a_c = (4 \text{ m/ s})^2 / (1.5 \text{ m}) = (16 / 1.5) \text{ m}^2 / \text{s}^2 \text{ m}$$

$$a_c = 10.7 \text{ m/s}^2$$