

2-6 For an object to move in a circle it has to experience a radially inward acceleration $a = v^2/r$. Thus the tension $T = ma = mv^2/r$. Substituting, $T = 0.2 \text{ [kg]} \times (6 \text{ [m/s]})^2 / 0.4 \text{ [m]} = 18 \text{ [N]}$. (C) is the correct answer.