

88. The equation of continuity is

$$A_i v_i = A_f v_f$$

where $A = \pi r^2$. Therefore,

$$v_f = v_i \left(\frac{r_i}{r_f} \right)^2 = (0.09) \left(\frac{0.2}{0.6} \right)^2 .$$

Consequently, $v_f = 1.00 \times 10^{-2}$ m/s.