

From equation (5.56)

$$E_{\text{tot}} = \frac{\hbar^2 (3\pi^2 Nd)^{5/3}}{10\pi^2 m V^{2/3}}$$

From equations (5.54) and (5.53)

$$E_F = \frac{\hbar^2}{2m} \left( \frac{3\pi^2 Nd}{V} \right)^{2/3}$$

Hence

$$\frac{E_{\text{tot}}/(Nd)}{E_F} = \frac{3}{5}$$