

$$A = 4\pi r^2, \quad V = \frac{4\pi r^3}{3}$$

Om $A = k \cdot V^p$ så

$$4\pi r^2 = k \cdot \left(\frac{4\pi r^3}{3}\right)^p = k \cdot \left(\frac{4\pi}{3}\right)^p \cdot r^{3p}$$

r -potensen lika ger $3p = 2 \Leftrightarrow p = \frac{2}{3}$

koefficienten framför r^2 lika ger

$$4\pi = k \cdot \left(\frac{4\pi}{3}\right)^{2/3}$$

$$\Leftrightarrow k = \frac{4\pi}{\left(\frac{4\pi}{3}\right)^{2/3}} = \frac{4\pi \cdot 3^{2/3}}{4^{2/3} \cdot \pi^{2/3}} =$$

$$= 4^{1/3} \cdot \pi^{1/3} \cdot 3^{2/3} = 4^{1/3} \cdot \pi^{1/3} \cdot 9^{1/3} =$$

$$= (36\pi)^{1/3}$$