

3.92
6

$$V = \frac{1}{3} S r \cdot k$$

\downarrow \downarrow \rightarrow
 יחס הנפח פיון

:הנפח של המעב

$$V = \frac{1}{3} \left(\frac{a^2 \sqrt{3}}{4} \right) \cdot \frac{\sqrt{2}}{\sqrt{3}} a = \frac{\sqrt{2} a^3}{12}$$

\downarrow \downarrow
 יחס הנפח יחס הנפח

$$S_{\text{יחס}} = 4 \left(\frac{a^2 \sqrt{3}}{4} \right) = a^2 \sqrt{3}$$

\downarrow
 יחס הנפח

$$\frac{\sqrt{2} a^3}{12} = \frac{a^2 \sqrt{3}}{3} \cdot r \rightarrow r = \frac{\frac{\sqrt{2}}{12} a^3}{\frac{\sqrt{3}}{3} a^2} = \frac{\sqrt{2}}{4\sqrt{3}} a = \frac{\sqrt{6}}{12} a$$

$$S_{\text{יחס}} = 4\pi r^2 = 4\pi \left(\frac{\sqrt{6}}{12} a \right)^2 = \frac{\pi a^2}{6}$$