



PROPIEN OLCNEBU OPISANEBO NA  
TRJZNIKLE POLMOBOLNYA KOLNY  
JEST  $\frac{2}{3}$  WYSOKOSCI TEBO TRJZNIKA

2 TL. PITAGONAJA

$$a^2 - \frac{a^2}{4} = H^2$$

$$\frac{3a^2}{4} = H^2 \quad | \sqrt{\quad}$$

$$H = \sqrt{\frac{3a^2}{4}} = \frac{a\sqrt{3}}{2}$$

$$R = \frac{2}{3} H = \frac{2}{3} \cdot \frac{a\sqrt{3}}{2} = \frac{a\sqrt{3}}{3}$$

$$\text{obu}_{\text{kolka}} = 2\pi R = 2\pi \cdot \frac{a\sqrt{3}}{3}$$

$$\text{obu}_{\Delta} = 3a$$

$$\frac{\text{obu}_{\text{kolka}}}{\text{obu}_{\Delta}} = \frac{\frac{2\sqrt{3} a \pi}{3}}{3a} = \frac{2\sqrt{3} \cancel{a} \pi}{\cancel{9} a} = \frac{2\sqrt{3} \pi}{9}$$