

$$(1) \quad \frac{r}{h} = \frac{1}{\sqrt{3}}$$

$$(2) \quad \text{a) } M = \pi\sqrt{2} ; O = \pi(1+\sqrt{2})$$

$$\text{b) } M = 4.44 ; O = 7.58$$

$$(3) \quad \text{a) } O = \pi r^2(1+\sqrt{2}) ; O' = \pi r^2(1+\sqrt{5})$$

$$\text{b) } O = 0.746 \cdot O'$$

$$(4) \quad \text{a) } O = \pi r^2(1+\sqrt{2}) ; O' = \pi r^2(4+2\sqrt{5})$$

$$\text{b) } O = 0.354 \cdot O'$$