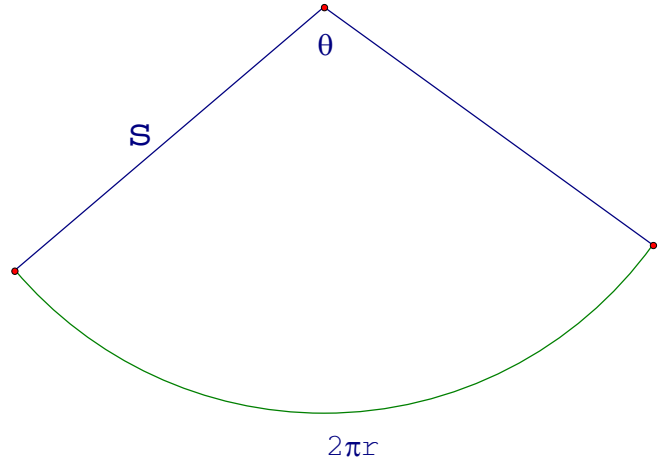
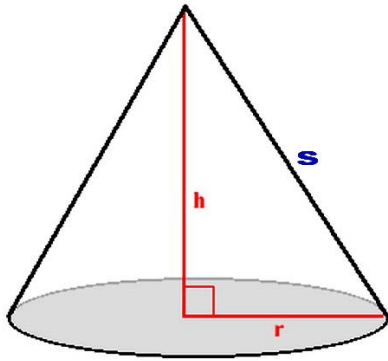


Frustum의 겉넓이

YGK



$$\pi s^2 : A = 2\pi : \theta$$

$$A = \frac{\pi s^2 \theta}{2\pi}$$

$$= \frac{s^2 \theta}{2}$$

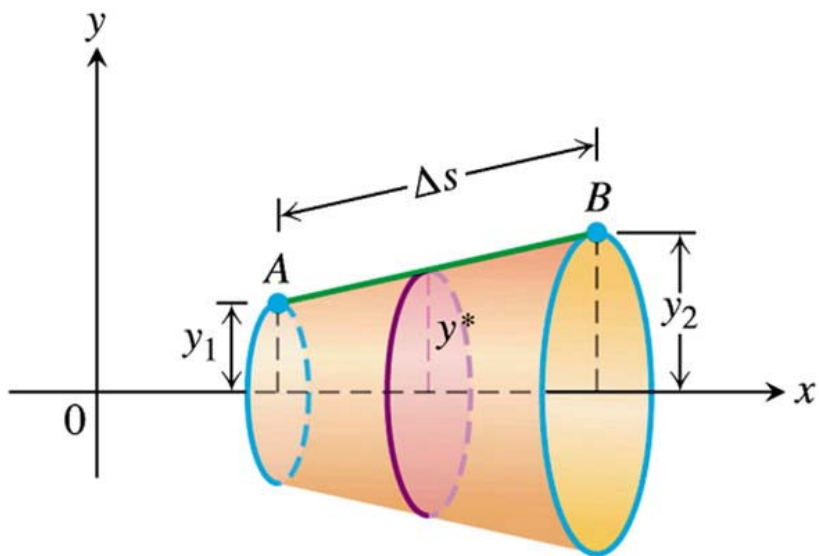
$$= \frac{\theta}{2} s^2$$

$$2\pi s : 2\pi r = 2\pi : \theta$$

$$\theta = \frac{2\pi \cdot 2\pi r}{2\pi s}$$

$$= \frac{2\pi r}{s}$$

$$A = \frac{\theta}{2} s^2 = \frac{1}{2} \frac{2\pi r}{s} s^2 = \pi r s$$



$$R - r = \Delta s$$

$$\theta R = 2\pi y_2$$

$$\theta r = 2\pi y_1$$

$$\frac{1}{2}\theta R^2 - \frac{1}{2}\theta r^2$$

$$= \frac{1}{2}\theta (R^2 - r^2)$$

$$= \frac{1}{2}\theta (R - r) (R + r)$$

$$= \frac{1}{2}\theta \Delta s (R + r)$$

$$= \frac{1}{2}\Delta s (\theta R + \theta r)$$

$$= \frac{1}{2}\Delta s (y_2 + y_1)$$

$$= \frac{1}{2}y^* \Delta s$$