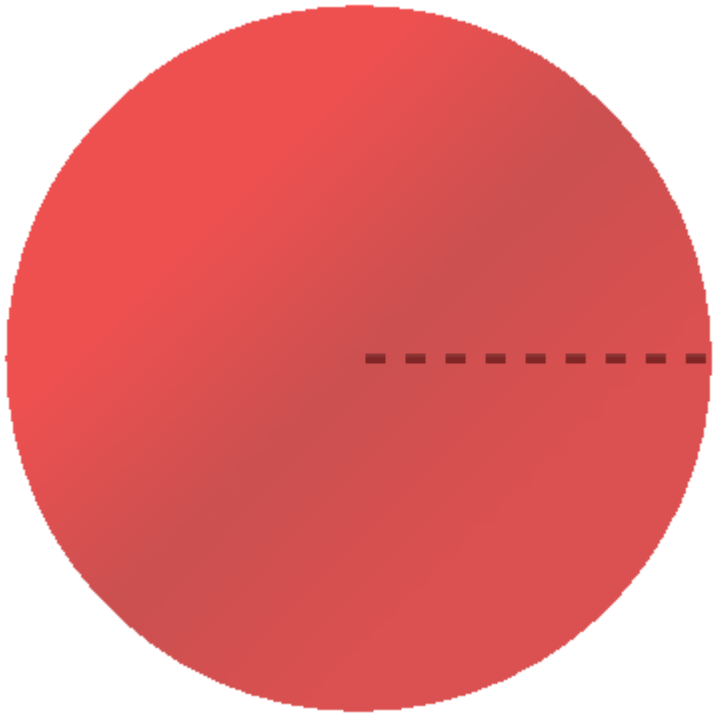
Radius of a Cube

Tom Button

@tombutton

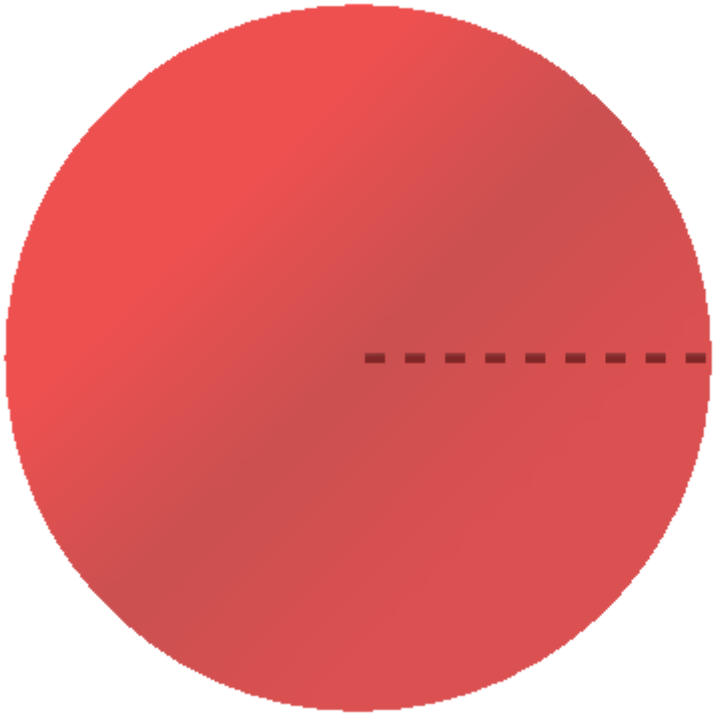


$$V = \frac{4}{3}\pi r^3$$

$$SA = 4\pi r^2$$

$$\frac{\mathrm{d}V}{\mathrm{d}r} = 4\pi r^2$$

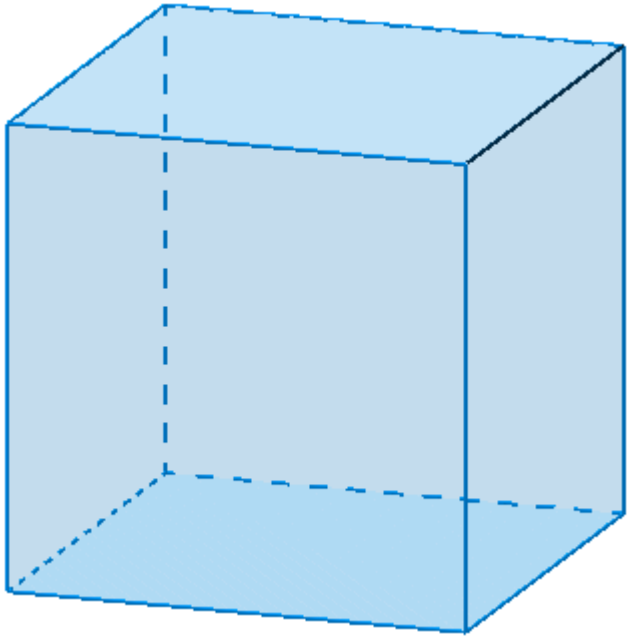
$$\tau = 2\pi$$



$$V = \frac{2}{3}\tau r^3$$

$$SA = 2\tau r^2$$

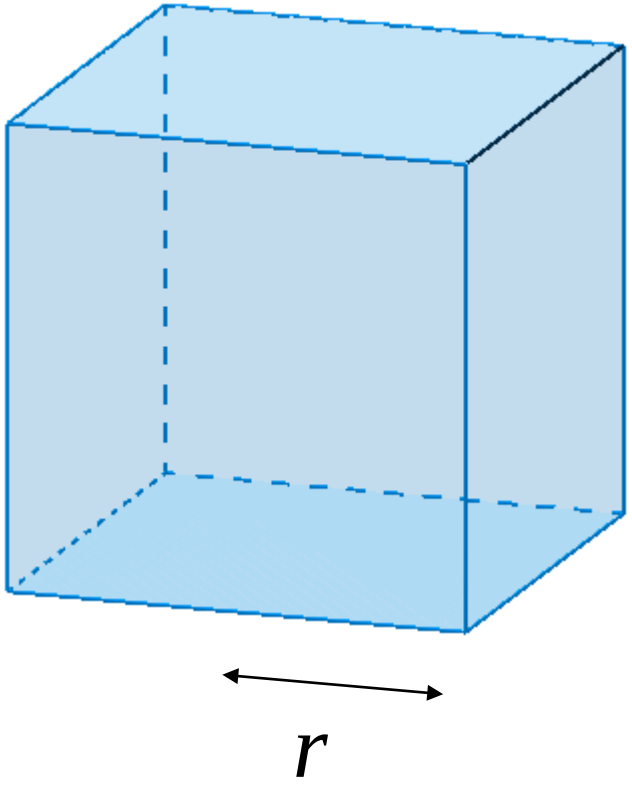
$$\frac{\mathrm{d}V}{\mathrm{d}r} = 2\tau r^2$$



$$V = a^3$$

$$\frac{\mathrm{d}V}{\mathrm{d}a} = 3a^2$$

$$SA = 6a^2$$

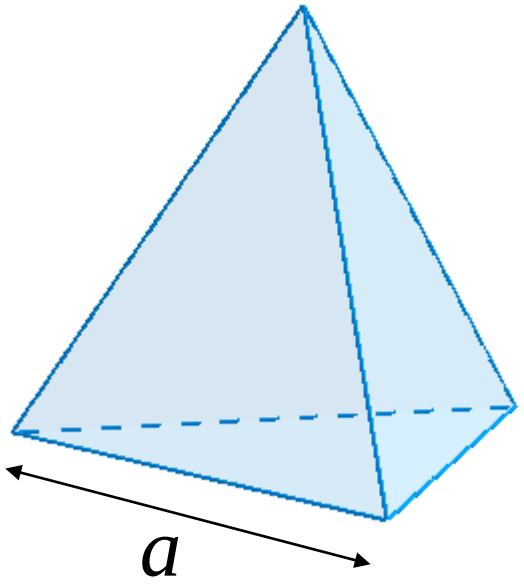


$$r = \frac{a}{2}$$

$$V = 8r^3$$

$$\frac{\mathrm{d}V}{\mathrm{d}r} = 24r^2$$

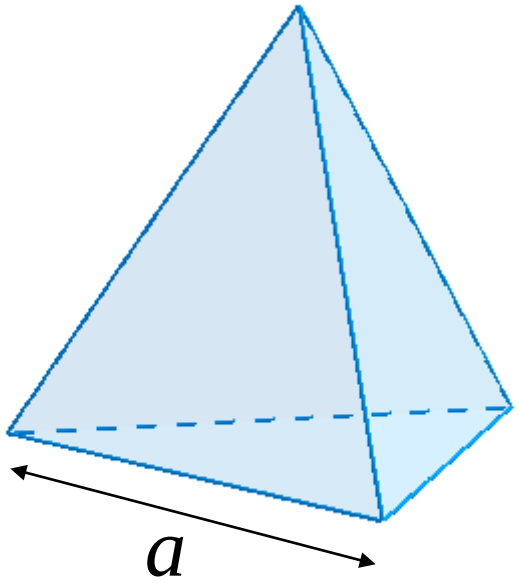
$$SA = 24r^2$$



$$V = \frac{\sqrt{2}}{12} a^3$$

$$SA = \sqrt{3} a^2$$

$$r = ka\,?$$

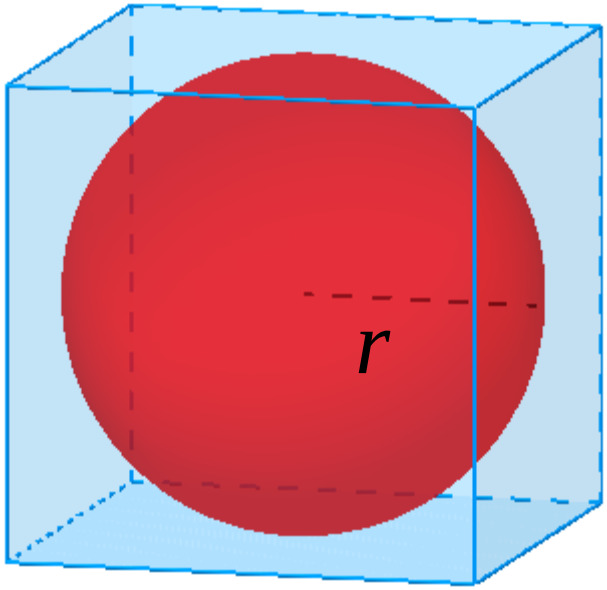


$$r = \frac{\sqrt{6}}{12} a$$

$$V = 8\sqrt{3} r^3$$

$$SA = 24\sqrt{3} r^2$$

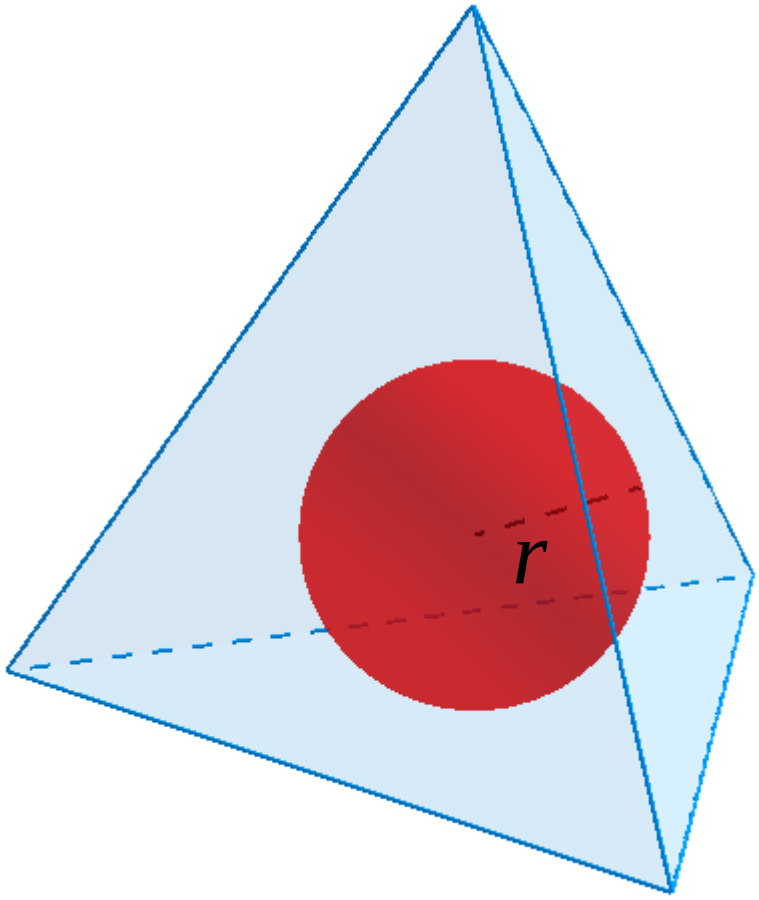
$$\frac{\mathrm{d}V}{\mathrm{d}r} = 24\sqrt{3} r^2$$



$$V = 8r^3$$

$$SA = 24r^2$$

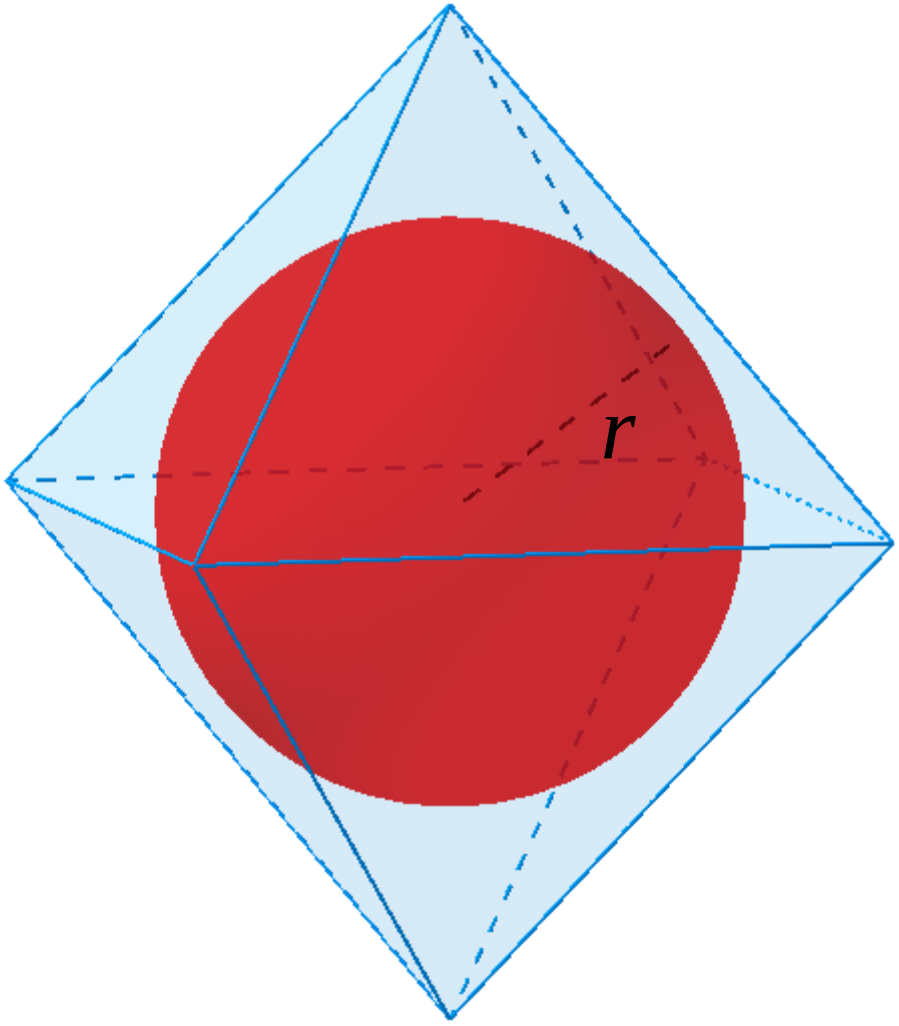
$$\frac{\mathrm{d}V}{\mathrm{d}r} = 24r^2$$



$$V = 8\sqrt{3}r^3$$

$$\frac{\mathrm{d}V}{\mathrm{d}r} = 24\sqrt{3}r^2$$

$$SA = 24\sqrt{3}r^2$$



$$V = 4\sqrt{3}r^3$$

$$\frac{\mathrm{d}V}{\mathrm{d}r} = 12\sqrt{3}r^2$$

$$SA = 12\sqrt{3}r^2$$