

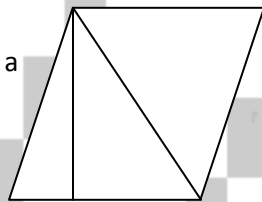
1. Osnova prizme je romb visine 24 cm i dijagonale 30 cm. U prizmu je upisan valjak. Izračunati razmeru površina valjka i prizme i razmeru njihovih zapremina ako je visina tela manja dijagonala romba,

$$h = 24$$

$$d = 30$$

$$H = d$$

$$\frac{Pv}{Pp} = \frac{Vv}{Vp} = ?$$



$$a-x \quad x$$

$$x^2 = d^2 - h^2$$

$$x^2 = 324$$

$$x = 18$$

$$a^2 - (a-x)^2 = h^2$$

$$a^2 - a^2 + 2ax - x^2 = 24^2$$

$$36a = 900$$

$$a = 25$$

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

$$r = 12$$

$$Vp = ahH$$

$$Vp = 18000$$

$$Vv = r^2 \pi H$$

$$Vv = 4320\pi$$

$$\frac{Vv}{Vp} = \frac{4320\pi}{18000}$$

$$\frac{Vv}{Vp} = \frac{6\pi}{25}$$

$$Pp = 2ah + 4aH$$

$$Pp = 4200$$

$$Pv = 2r\pi(r+H)$$

$$Pv = 1008\pi$$

$$\frac{Pv}{Pp} = \frac{1008\pi}{4200}$$

$$\frac{Pv}{Pp} = \frac{6\pi}{25}$$

