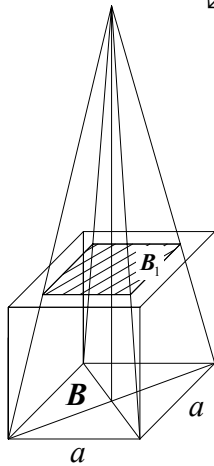


M-16 Kocka duljine brida 3 cm i uspravna četverostrana piramida imaju zajedničku osnovku i jednake volumene. Koliki je volumen dijela piramide koji se nalazi izvan kocke?

- A. 6 cm^3 B. 27 cm^3 C. 8 cm^3 D. 64 cm^3 E. 125 cm^3

Nacrtajmo skicu:

Tako to izgleda
 ↓
 sada izbrišemo suvišne bridove
 pa će ostati vidljiv dio piramide
 koji se nalazi izvan kocke.



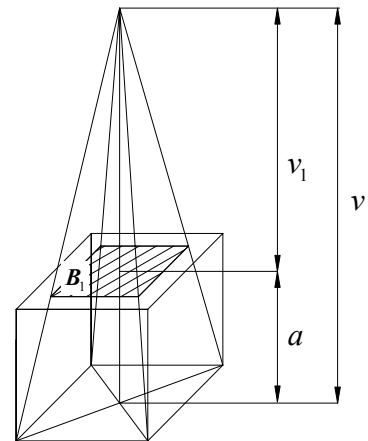
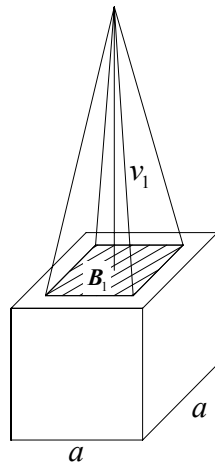
1.

$$a = 3$$

$$V_{\text{kocke}} = a^3$$

$$V_k = 3^3$$

$$V_k = 27$$



3.

$$v_1 = v - a$$

$$v_1 = 9 - 3$$

$$v_1 = 6$$

v_1 – visina djela piramide
 koji se nalazi izvan kocke

2.

piramida

$$a = 3$$

$$V_p = V_k = 27$$

$$V_p = \frac{B \cdot v}{3}$$

$$27 = \frac{a^2 \cdot v}{3}$$

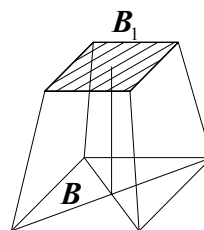
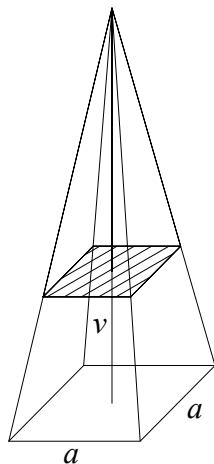
$$27 = \frac{3^2 \cdot v}{3}$$

$$27 = 3 \cdot v \quad / : 3$$

$$9 = v$$

$$v = 9$$

v – visina cijele piramide



4. Preko krnje piramide
 imamo:

$$B : B_1 = v^2 : v_1^2$$

$$9 : B_1 = 9^2 : 6^2$$

$$\frac{9}{B_1} = \frac{81}{36} \quad / \cdot \frac{36}{81} \cdot B_1$$

$$9 \cdot \frac{36}{81} = B_1$$

$$B_1 = 4$$

5. volumen dijela piramide koji se nalazi izvan kocke

$$V_1 = \frac{B_1 \cdot v_1}{3} = \frac{4 \cdot 6}{3}$$

$$V_1 = 8$$

