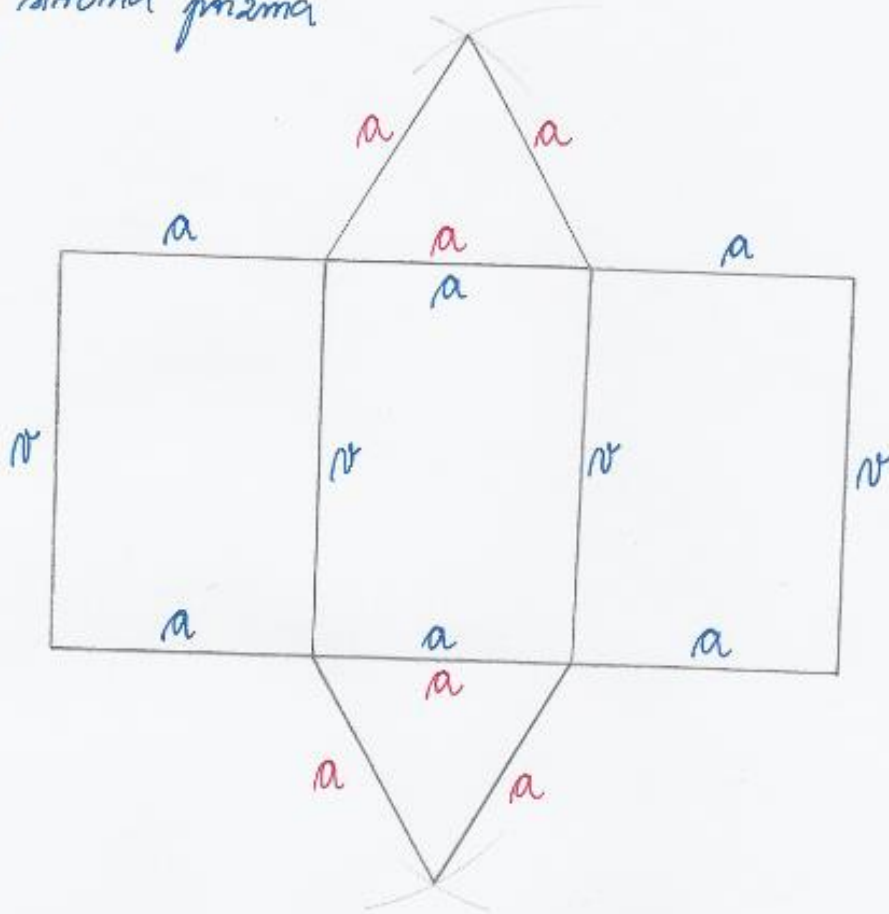


PROSTORNA TRISTRANIH PRIZEM

pravilna 3-strona prizma
 $a = 4 \text{ cm}$
 $r = 6 \text{ cm}$



a.) $a = 4 \text{ cm}$
 $r = 6 \text{ cm}$
 $P = ?$

$$P = 2 \cdot \psi + pl$$

$$P = 2 \cdot \frac{a^2 \sqrt{3}}{4} + 3ar$$

$$P = 2 \cdot \frac{4^2 \sqrt{3} \cdot 8}{4 \cdot 2 \cdot 1} + 3 \cdot 4 \cdot 6$$

$$P = (8\sqrt{3} + 72) \text{ cm}^2$$

$$P = 8(\sqrt{3} + 9) \text{ cm}^2$$

$$P = 85,84 \text{ cm}^2 \approx 86 \text{ cm}^2$$

$\sqrt{3} \approx 1,73$

ψ : Za izdelavo mreže sem porabil približno $85,84 \text{ cm}^2$ (86 cm^2) papirja.

b.) $V = ?$

$$V = \psi \cdot r$$

$$V = \frac{a^2 \sqrt{3}}{4} \cdot r$$

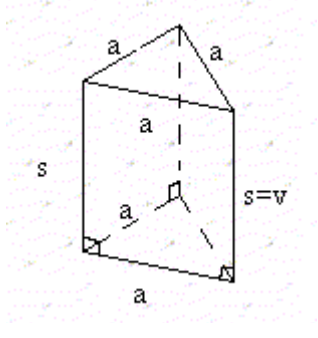
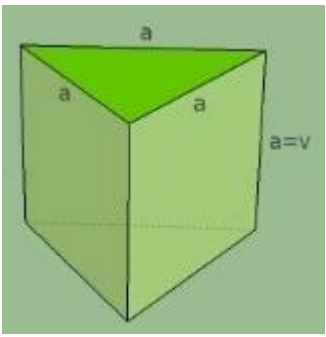
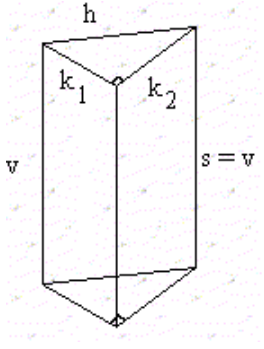
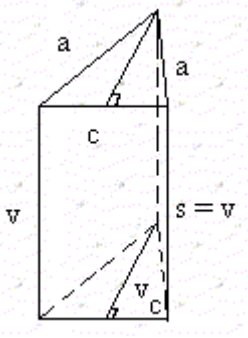
$$V = \frac{4^2 \sqrt{3} \cdot 4}{4 \cdot 1} \cdot 6$$

$$V = 24\sqrt{3} \text{ cm}^3$$

$$V = 41,52 \text{ cm}^3 = 0,04152 \text{ dm}^3 = 0,04152 \text{ l} = 0,4152 \text{ dl}$$

ψ : ehe, ker je prostornina škatlice $0,4152 \text{ dl}$.

PRILOGA 1

poševna projekcija telesa (skica)	$V = \mathcal{O} \cdot v$
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Pravilna 3-strana prizma</div> 	$V = \frac{a^2 \sqrt{3}}{4} \cdot v$
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">Enakoroba 3-strana prizma</div> 	$V = \frac{a^2 \sqrt{3}}{4} \cdot a$ $V = \frac{a^3 \sqrt{3}}{4}$
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">3-strana prizma (\mathcal{O}-pravokotni trikotnik)</div> 	$V = \frac{k_1 \cdot k_2}{2} \cdot v$
<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">3-strana prizma (\mathcal{O} - enakokraki trikotnik)</div> 	$V = \frac{c \cdot v_c}{2} \cdot v$

VAJA DELA MOJSTRA, ČE MOJSTER DELA VAJO

ŠSD 9 str. 148/17.b

$$V = 9\sqrt{3} \text{ cm}^2$$

$$r = 18 \text{ cm}$$

$$V = ?$$

$$V = U \cdot r$$

$$V = 9\sqrt{3} \cdot 18$$

$$V = 162\sqrt{3} \text{ cm}^3$$

U.: Prostornina prizme je $162\sqrt{3} \text{ cm}^3$.

ŠSD 9 str. 148/25

→ U- enakostranični Δ 

pravilna 3-strana prizma

$$r = 9 \text{ cm}$$

$$pl = 108 \text{ cm}^2$$

$$P = ?$$

$$V = ?$$

②
$$P = 2 \cdot U + pl$$

$$P = 2 \cdot \frac{a^2\sqrt{3}}{4} + pl$$

$$P = \frac{4^2\sqrt{3} \cdot 8}{2 \cdot 1} + 108$$

$$P = (8\sqrt{3} + 108) \text{ cm}^2$$

$$P \doteq 121,84 \text{ cm}^2$$

①

$$pl = r \cdot r$$

$$pl = 3a \cdot r$$

$$108 = 3a \cdot 9$$

$$27a = 108 \quad | :27$$

$$a = 4 \text{ cm}$$

③

$$V = U \cdot r$$

$$V = \frac{a^2\sqrt{3}}{4} \cdot r$$

$$V = \frac{4^2\sqrt{3} \cdot 9}{4 \cdot 1}$$

$$V = 36\sqrt{3} \text{ cm}^3$$

$$V \doteq 62,28 \text{ cm}^3$$

ŠSD 9 str. 148/26

→ U- enakostranični Δ

enakokrta 3-strana prizma

$$a = r$$

$$pl = 432 \text{ cm}^2$$

$$a = ?$$

$$P = ?$$

$$V = ?$$

$$pl = r \cdot r$$

$$pl = 3a \cdot a$$

$$432 = 3a^2$$

$$3a^2 = 432 \quad | :3$$

$$a^2 = 144 \quad | \sqrt{\quad}$$

$$a = 12 \text{ cm}$$

$$P = 2 \cdot U + pl$$

$$P = 2 \cdot \frac{a^2\sqrt{3}}{4} + pl$$

$$P = \frac{12^2\sqrt{3} \cdot 72}{2 \cdot 1} + 432$$

$$P = (72\sqrt{3} + 432) \text{ cm}^2$$

$$P \doteq 556,56 \text{ cm}^2$$

$$V = U \cdot r$$

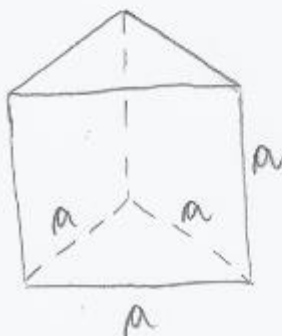
$$V = \frac{a^2\sqrt{3}}{4} \cdot a$$

$$V = \frac{a^3\sqrt{3}}{4}$$

$$V = \frac{12^3\sqrt{3}}{4}$$

$$V = 432\sqrt{3} \text{ cm}^3$$

$$V \doteq 747,36 \text{ cm}^3$$



2. morem tudi to?

prorokna 3-strana prizma

$$a = 3 \text{ cm}$$

$$v = 19 \text{ cm}$$

$$P_{1 \text{ ČOKOLADE}} = ?$$

$$P_1 \cdot 50 = ?$$

$$P = 2 \cdot v + p \cdot l$$

$$P = 2 \cdot \frac{a^2 \sqrt{3}}{4 \cdot 2} + 3 \cdot a \cdot v$$

$$P = \frac{3^2 \sqrt{3}}{2} + 3 \cdot 3 \cdot 19$$

$$P = 4,5 \sqrt{3} + 171$$

$$P = 7,785 + 171$$

$$P = 178,785 \text{ cm}^2$$

$$\begin{array}{r} 178,785 \cdot 50 \\ \hline 8939,250 \end{array}$$

POVRŠINA
ZA KARTONA
50 ČOKOLAD

$$10\% \text{ od } 8939,25 =$$

$$= 893,925 \quad \leftarrow 10\% \text{ POVRŠINE KARTONA 50-ih ČOKOLAD}$$

$$\begin{array}{r} 8939,250 \\ + 893,925 \\ \hline 9833,175 \end{array} \quad \leftarrow \text{SKUPNA POVRŠINA KARTONA}$$

W.: Potrebujemo približno $9833,175 \text{ cm}^2$ kartona
oziroma približno 99 dm^2 , kar je malo
manj kot 1 m^2 .