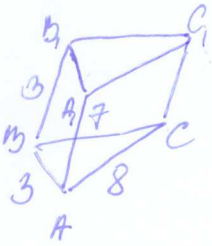
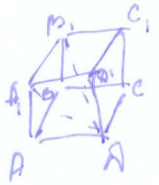
$S_{бок} = P_{осн.} \cdot h$



$P_{осн.} = 3+7+8 = 18$

$S_{бок.} = 18 \cdot 3 = 54$

2)



$B_1D = 10\sqrt{8}$

$B_1D = D$

$A_1D = d$

a - сторона куба $\quad a = \frac{d}{\sqrt{2}}$

$a^2 + d^2 = D^2$

$a^2 = D^2 - (a\sqrt{2})^2$

$3a^2 = D^2$

$a = \frac{D}{\sqrt{3}}$

$a = \frac{10\sqrt{8}}{\sqrt{3}}$

3)

$S_{осн.} = 100 см^2$

$AO = 13 см$ OK - апофема

т.к. ABCD - квадрат $S_{кв.} = a^2 =$

$AB = BC = CD = AD = 10$

$S_{бок} = \frac{1}{2} P \cdot h$ - где h - апофема

ΔAOD - равнобед. $AO = OD = 13 см$, $AD = 10$

ΔAOK - прям. $\angle OKA = 90^\circ$

т. к ΔAOD - равноб. то OK - высота, м

$\Rightarrow AK = KD = 5 см$

$OK^2 + AK^2 = AO^2$

$OK^2 = 13^2 - 5^2$

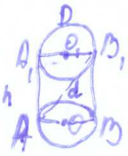
$OK^2 = 169 - 25 = 144$

$OK = 12$ - апофема

$P_{ABCD} = 10 \cdot 4 = 40$

$S_{бок.} = \frac{1}{2} \cdot 40 \cdot 12 = 240$

(4).



$R = 12$ см

$AB_1 = 30$

а) $A_1B_1 = AB = D = 24$

$AB_1 = d = 30$

$AA_1 = h = \sqrt{d^2 - D^2}$

$AA_1 = h = \sqrt{900 - 576}$

$AA_1 = h = 18$ см

б). $S_{осев.сеч.} = h \cdot D$

$S_{осев.сеч.} = 18 \cdot 24 = 432$ (см^2)

в) $S_б = 2\pi Rh$

$S_б = 2 \cdot \pi \cdot 12 \cdot 18 = 432\pi$ см^2

$S_б = 432 \cdot 3.14 = 1356{,}48$ см^2

г) $S_{пол.} = 2S_{осн} + S_{бок.}$

$S_{осн.} = \pi R^2 = \pi \cdot 144 = 144\pi$

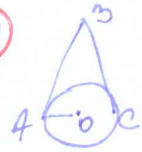
или $S_{осн} = 144 \cdot 3.14 = 452{,}16$ см^2

$S_{пол.} = 2 \cdot 144\pi + 432\pi = 288\pi + 432\pi = 720\pi$ (см^2)

или

$S_{пол.} = 2 \cdot 452{,}16 + 1356{,}48 = 2260{,}80$ (см^2)

(5).



$AB = 22$

$\angle BAO = 60^\circ$

$\triangle ABO$ − прям. $\angle BOA = 90^\circ$

$\angle BAO = 60^\circ \Rightarrow \angle ABO = 30^\circ$

$\triangle CBO$ − прям. и $= \triangle ABC \Rightarrow$

что $\triangle ABC$ − правильный со сторонами $a = l = 22$ см

$D = 22$ $R = 11$

а) $S_{осн.} = \pi R^2 = \pi \cdot 11^2 = 121\pi$

б) $S_{бок} = \pi \cdot R \cdot l = \pi \cdot 11 \cdot 22 = 242\pi$