Ficha Δ — Tema 12

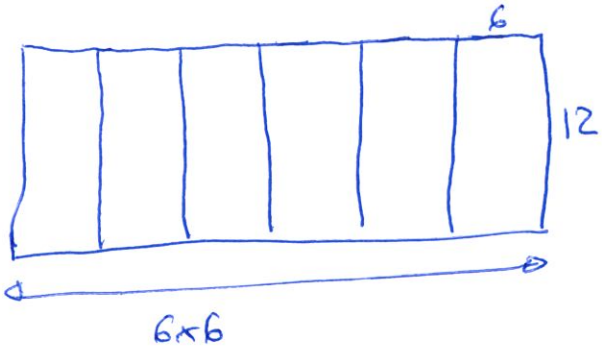
① $x=?$ $\Delta lat=?$ $\Delta total=?$ $V=?$

a) 

En un hexágono el radio = lado

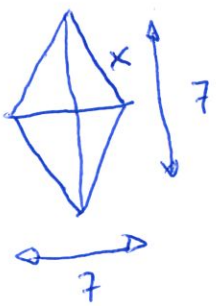
$x=\sqrt{6^2-3^2}=\sqrt{27}=3\sqrt{3}$ cm

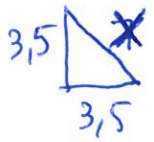
$\Delta lateral = 36\times 12 = 432\ cm^2$



$\Delta_{TOTAL} = 2\Delta base + \Delta lateral = 2\cdot\frac{36\cdot 3\sqrt{3}}{2} + 432 = 619{,}06\ cm^2$

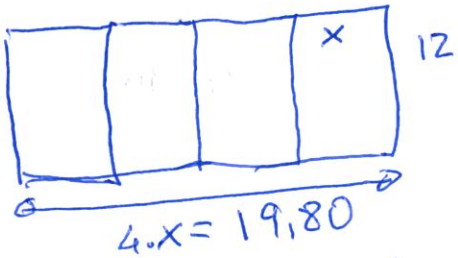
$V = \Delta base \cdot h = \frac{36\cdot 3\sqrt{3}}{2}\cdot 12 = 1122{,}37\ cm^3$

b) 



$x=\sqrt{3{,}5^2+3{,}5^2}\simeq 4{,}95$ cm

$\Delta lateral = 19{,}8\times 12 = 237{,}6\ cm^2$



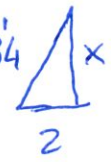
$\Delta_{TOTAL} = 2\Delta base + \Delta lateral$

$= 2\frac{D\cdot d}{2} + 237{,}6$

$\Delta_{TOTAL} = 49 + 237{,}6 = 286\ cm^2$

$V = \Delta base \cdot h = \frac{D\cdot d}{2}\cdot h = 294\ cm^3$

c)



$x = \sqrt{3{,}4^2 - 2^2} = 2{,}75$ cm

$\Delta \text{lateral} = 5\ \Delta \text{triángulo} = 5 \cdot \frac{4 \cdot 2'75}{2} = 77{,}5\ cm^2$

$\Delta_{TOTAL} = \Delta \text{base} + \Delta \text{lateral} = \frac{P \cdot ap^t}{2} + 77{,}5 = \frac{20 \cdot 2'75}{2} + 77{,}5$

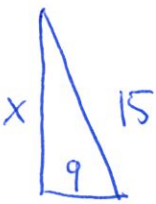
$\Delta_{TOTAL} = 105\ cm^2$

$V = \frac{\Delta \text{base} \cdot h}{3} = \frac{27'5 \cdot h}{3} = 66{,}38\ cm^3$

Debo calcular h

$h = \sqrt{8^2 - 3{,}4^2} = 7{,}24$ cm

d)



$x = \sqrt{15^2 - 9^2} = 12$

$\Delta \text{lateral} = \pi r g = \pi \cdot 9 \cdot 15 = 135\pi \simeq 424{,}12\ cm^2$

$\Delta_{TOTAL} = \pi r^2 + \pi r g = \pi \cdot 9^2 + 424{,}12 \simeq 678{,}58\ cm^2$

$V = \frac{\pi r^2 \cdot h}{3} = \frac{\pi \cdot 9^2 \cdot 12}{3} = 324\pi \simeq 101{,}88\ cm^3$

e)

$x = \sqrt{10^2 - 3^2} = 9{,}54$ cm

$\Delta \text{lateral} = b \cdot a = 2\pi r \cdot h = 2 \cdot \pi \cdot 3 \cdot 9{,}54 = 179{,}81\ cm^2$

$\Delta_{TOTAL} = 2\pi r^2 + 179{,}81 = 236{,}36\ cm^2$

$V = \pi r^2 \cdot h = \pi \cdot 3^2 \cdot 9{,}54 = 269{,}74\ cm^3$

f) $\Delta = 4\pi r^2 : 2 = 4\pi \cdot 4^2 : 2 = 32\pi = 100{,}53\ cm^2$

Media esfera $V = \frac{4\pi r^3}{3} : 2 = \frac{4\pi 4^3}{3} : 2 = 134{,}04\ cm^3$