

~~30~~ PIARE GEOMETRÍA SEMANA 21 ABRIL

(11)

(1a) Dodecaedro: poliedro con 12 caras iguales pentágonos

$$A_{\text{pentágono}} = \frac{P \cdot a}{2} = \frac{5 \cdot 8 \cdot 5,5}{2}$$



$$A_{\text{dodecaedro}} = 12 \cdot \frac{5 \cdot 8 \cdot 5,5}{2} = 1320 \text{ cm}^2$$

(2a)

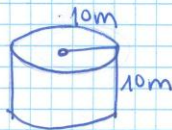


$$A_{\text{triángulo}} = \frac{3 \cdot 4 \cdot 2}{2} = 12 \text{ cm}^2$$

$$A_{\text{caras laterales}} = 3 \cdot 10 + 4 \cdot 10 + 5 \cdot 10 = 120 \text{ cm}^2$$

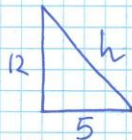
$$A_{\text{total}} = 12 + 120 = 132 \text{ cm}^2$$

(3a)



$$A = 2 \cdot \pi \cdot 10^2 + 10 \cdot 2\pi \cdot 10 = 200\pi + 200\pi = 400\pi = 1256 \text{ m}^2$$

(4a)



$$h^2 = 12^2 + 5^2$$
$$h = 13 \text{ cm}$$



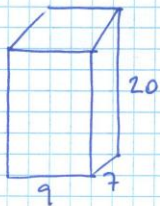
$$A_{\text{total}} = A_{\text{base}} + A_{\text{caras laterales}}$$

$$A_{\text{base}} = 10^2 = 100 \text{ cm}^2$$

$$A_{\text{triángulo}} = \frac{10 \cdot 13}{2} = 65 \text{ cm}^2$$

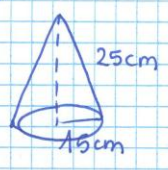
$$A_{\text{total}} = 100 + 65 \cdot 4 = 360 \text{ cm}^2$$

(5a)



$$V_{\text{volumen}} = a \cdot b \cdot c = 9 \cdot 7 \cdot 20 = 1260 \text{ cm}^3$$

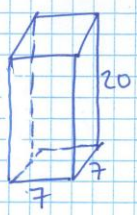
6a



$$V = \frac{1}{3} (\pi \cdot r^2 \cdot h) = \frac{1}{3} \cdot \pi \cdot 15^2 \cdot 20 = 4712 \text{ cm}^3$$

$$A_{\text{total}} = \pi \cdot R^2 + \pi \cdot R \cdot g = \pi \cdot 15^2 + \pi \cdot 15 \cdot 25 = 225\pi + 375\pi = 600\pi = 1884 \text{ cm}^2$$

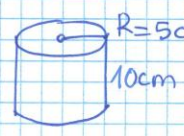
7a



$$A_{\text{total}} = 7 \cdot 7 \cdot 2 + 20 \cdot 7 \cdot 4 = 98 + 560 = 658 \text{ cm}^2$$

$$V_{\text{total}} = 7 \cdot 7 \cdot 20 = 980 \text{ cm}^3$$

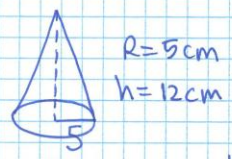
8a



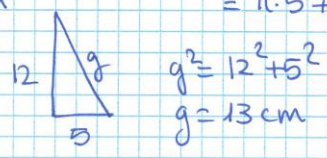
$$A_{\text{total}} = 2\pi R^2 + 2\pi R h = 2\pi \cdot 5^2 + 2\pi \cdot 5 \cdot 10 = 150\pi = 471 \text{ cm}^2$$

$$V = \pi R^2 \cdot h = \pi \cdot 5^2 \cdot 10 = 785 \text{ cm}^3$$

9a



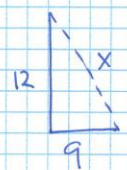
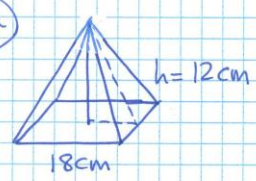
$$a) A_{\text{total}} = \pi R^2 + \pi \cdot R \cdot g = \pi \cdot 5^2 + \pi \cdot 5 \cdot 13 = 282 \text{ cm}^2$$



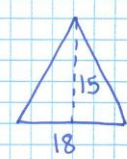
$$g^2 = 12^2 + 5^2 \\ g = 13 \text{ cm}$$

$$b) V_{\text{cono}} = \frac{1}{3} A_{\text{base}} \cdot h = \frac{1}{3} \cdot \pi R^2 \cdot h = \frac{1}{3} \cdot \pi \cdot 5^2 \cdot 12 = 314 \text{ cm}^3$$

10a



$$12^2 + 9^2 = x^2 \\ x = 15 \text{ cm}$$



$$A = \frac{18 \cdot 15}{2} = 135 \text{ cm}^2$$

$$A_{\text{total}} = A_{\text{base}} + A_{\text{caras laterais (triangulos)}} \\ = 18^2 + 4 \cdot 135 = 864 \text{ cm}^2$$

$$V = \frac{1}{3} \cdot A_{\text{base}} \cdot h \\ V = \frac{1}{3} \cdot 324 \cdot 12 \\ V = 1296 \text{ cm}^3$$

SOLUCIONES SECCIONA 21 ABRIL 3º PTAPE

1a)

$$\begin{aligned} \text{Masa molar Cu} &= 63,5\text{g} \\ \text{Masa molar Zn} &= 65,37\text{g} \\ \text{Masa molar Li} &= 7\text{g} \\ \text{Masa molar Na} &= 23\text{g} \\ \text{Masa molar P} &= 31\text{g} \\ \text{Masa molar He} &= 4\text{g} \end{aligned}$$

2a)

$$\begin{aligned} \text{M molar NaCl} &= 23 + 35,5 = 58,5\text{g} \\ \text{M molar HNO}_3 &= 1 + 14 + 16 \cdot 3 = 63\text{g} \\ \text{M molar NH}_3 &= 14 + 1 \cdot 3 = 17\text{g} \\ \text{M molar C}_4\text{H}_{10} &= 12 \cdot 4 + 10 = 58\text{g} \end{aligned}$$

3a)

$$\begin{aligned} \text{M molar Au} &= 197\text{g} \\ \frac{1\text{ mol Au}}{197\text{g}} &= \frac{1,5\text{ mol Au}}{x} \quad x = 295,5\text{g} \end{aligned}$$

4a)

$$\begin{aligned} \text{M molar H}_2\text{SO}_4 &= 1 \cdot 2 + 32 + 16 \cdot 4 = 98\text{g} \\ \frac{1\text{ mol H}_2\text{SO}_4}{98\text{g}} &= \frac{2,5\text{ mol H}_2\text{SO}_4}{x} \quad x = 245\text{g} \end{aligned}$$