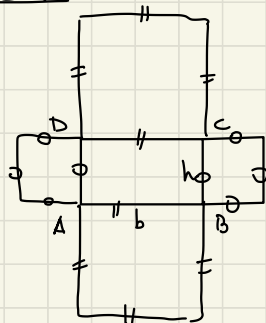


Es 44:



$$AB = b \quad BC = h$$

$$\begin{cases} 6h + 6b - 10 = \frac{15}{2}b + \frac{16}{5}h \\ \frac{3}{5}h = 5 + \frac{1}{4}b \end{cases}$$

$$\begin{cases} 6h + 6b - 100 = 45b + 32h \\ 12h = 100 + 5b \end{cases}$$

$$\begin{cases} 15b - 28h = -100 \\ 5b - 12h = -100 \end{cases} \cdot 3 \quad \downarrow -$$

$$\begin{aligned} 8h &= 200 \\ h &= 25 \Rightarrow b = 40 \end{aligned}$$

$$2b^2 + 2h^2 + bh = 2 \cdot (2^3 5)^2 + 2(5^2)^2 + 5^2 \cdot 2^3 \cdot 5 =$$

$$2^4 \cdot 5^2 + 2 \cdot 5^4 + 2^3 \cdot 5^3 = 2 \cdot 5^2 (2^6 + 5^2 + 2^2 \cdot 5) =$$

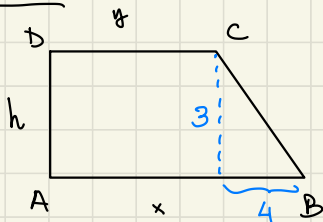
$$= 50(64 + 25 + 20) =$$

$$= 50(109) =$$

$$= \frac{100 \cdot 109}{2} = \frac{10900}{2} = 5450$$

Non molto furbo

Es 45



$$AD = h$$

$$AB = x$$

$$DC = y$$

$$\begin{cases} x = \frac{5}{3}y \\ h + \frac{1}{3}y = \frac{x}{2} \end{cases} \quad \text{la netta sotto}$$

$$\frac{3}{4}x - \frac{1}{2}y + \frac{1}{6}(y+h) = 6$$

$$\begin{cases} h + \frac{1}{3}y = \frac{5}{6}y \end{cases}$$

$$\frac{5}{4}y - \frac{1}{2}y + \frac{1}{6}y + \frac{1}{6}h = 6$$

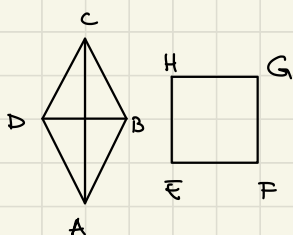
$$\leadsto \begin{cases} 6h + 2y = 5y \\ 15y - 6y + 2y + 2h = 42 \end{cases}$$

$$\begin{cases} 3y = 6h \rightsquigarrow y = 2h \\ 4y + 2h = 42 \rightsquigarrow 24h = 42 \rightsquigarrow h = 3 \rightsquigarrow y = 6 \rightsquigarrow x = 10 \end{cases}$$

$$CB^2 = h^2 + (x-y)^2 = 5^2 \rightsquigarrow CB = 5$$

$$P = AB + BC + CD + DA = 3 + 6 + 10 + 5 = 24$$

Es 46



$$\begin{aligned} BD &= d \\ AC &= b \\ EF &= \ell \end{aligned}$$

$$\begin{cases} d + b + \ell = 140 \\ \ell = \frac{1}{3}(d + b) \end{cases}$$

Caso 1: $\frac{1}{2}b + \frac{1}{3}d = \ell + 10$

Caso 2: $\frac{1}{2}d + \frac{1}{3}b = \ell + 10$

Se guardo solo $\begin{cases} \boxed{d+b} + \ell = 140 \\ 3\ell = \boxed{d+b} \end{cases} \rightsquigarrow 3\ell + \ell = 140 \rightsquigarrow \ell = \frac{140}{4} = 35$

Caso 2: $\begin{cases} d + b = 105 \\ \frac{1}{2}d + \frac{1}{3}b = 35 + 10 \end{cases} \quad \begin{cases} d + b = 105 \\ 3d + 2b = 270 \end{cases} \quad \begin{cases} 3d = 315 - 3b \\ 3d = 270 - 2b \end{cases}$

$$\begin{aligned} 315 - 3b &= 270 - 2b \rightsquigarrow b = 45 \\ \rightsquigarrow d &= 105 - 45 = 60 \end{aligned}$$

Dato che $b \geq d$, la soluzione non va. Imponendo il caso 1 trovo gli stessi risultati coerenti $b = 60$, $d = 45$, $\ell = 35$... e poi fare conti ...

Es 86 pag 754

86
★★

$$\sqrt{6 + \sqrt{10 - \sqrt{5 - \sqrt{(-4)^2}}}} : \sqrt[3]{16 : \sqrt[3]{\frac{1}{64}}} - \sqrt[3]{-\frac{9}{8} \sqrt{9}}$$

Handwritten annotations on the image:

- Red bracket under $\sqrt{(-4)^2}$ with label 4 .
- Pink bracket under $\sqrt{5 - 4}$ with label 1 .
- Green bracket under $\sqrt{6 + 1}$ with label 3 .
- Purple bracket under $\sqrt[3]{\frac{1}{64}}$ with label $\frac{1}{4}$.
- Text below: $16 : \frac{1}{4} = 64$ perde l'ho letto MeBetti.
- Pink bracket under $\sqrt{9}$ with label 3 .
- Green bracket under $-\frac{9}{8} \cdot 3$ with label $-\frac{27}{8}$.

3

$$: 4 - \left(-\frac{3}{2}\right) = \frac{3}{4} + \frac{3}{2} = \frac{9}{4}$$

Esercizio:

$$\sqrt[3]{2^9} = 2^3 \quad \sqrt{3^{50}} = 3^{25} \quad \sqrt[3]{3^6 \cdot 2^9} = 3^2 \cdot 2^3$$

$$\sqrt[3]{2^{10}} = \sqrt[3]{2^3 \cdot 2^3 \cdot 2^3 \cdot 2} = 2 \cdot 2 \cdot 2 \sqrt[3]{2} = 8 \sqrt[3]{2} \left(= 2^{\frac{10}{3}}\right)$$