1)

A total: $80 m^2$ | $2A_{base} = 2x$

h = 3m | $A_{lateral} = 4.3x = 12x$

$80 = 2x^2 + 12x$

$2x^2 + 12x - 80 = 0$

$\Delta = 12^2 - 4.2.-80$

$\Delta = 144 + 640$

$\Delta = 784$

$x = \frac{-12 \pm \sqrt{784}}{2.2}$

$x = \frac{-12 \pm 28}{4}$

$x_I = \frac{-12+28}{4} = 4m$

$x_{II} = \frac{-12-28}{4} = -10$

2)

$A_{base} = 24\sqrt{3}\ cm^2$

$h = 2\sqrt{3}$

base → $24\sqrt{3} = 3l^2\sqrt{3}/2$

$48\sqrt{3} = 3l^2\sqrt{3}$

$48\sqrt{3}/3 = l^2\sqrt{3}$

$16\sqrt{3} = l^2\sqrt{3}$

$l^2 = \frac{16\sqrt{3}}{\sqrt{3}}$

$l^2 = 16$

$l = \sqrt{16}$

$l = 4$

$A_{lat} = 6$ ret. l.h

$A_{lat} = 6.4.2\sqrt{3}$

$A_{lat} = 48\sqrt{3}\ cm^2$

3) $h = \sqrt{3}$

$R = 2 = l$

$l = 2$

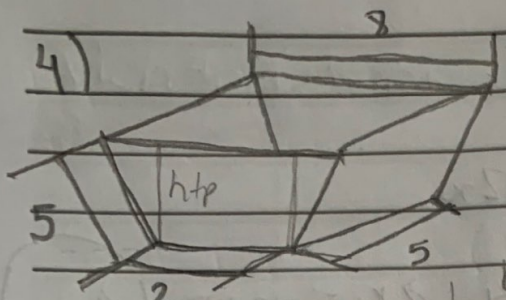
$A_{base} = 3l^2\sqrt{3}/2 \rightarrow 3.2^2\sqrt{3}/2 \rightarrow 3.4\sqrt{3}/2 \rightarrow 12\sqrt{3}/2$

$6\sqrt{3}$.

$A_{lateral} = 6.2\sqrt{3} \rightarrow 12\sqrt{3}$

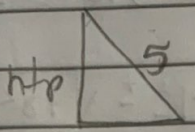
$A_{total} = 2.6\sqrt{3} + 12\sqrt{3} \rightarrow 12\sqrt{3} + 12\sqrt{3} \rightarrow 24\sqrt{3}$

4)



B = 8m
h = 2m

h prisma = 5m
htp = 9



$5^2 = 3^2 + htp^2$
$25 = 9 + htp^2$
$25 - 9 = htp^2$
$htp^2 = 16$
$htp = \sqrt{16}$
$htp = 4$

$A_{base} = \frac{(8+2)4}{2} = 10.2$

$A_{base} = 20m$

$Vol = 20.5 \rightarrow 100m^2$

R: D

$a + 2 + 2 = 8$
$2a = 8 - 2$
$2a = 6$
$a = 6/2$
$a = 3$

5)

htgr = 15
htgr = 10
hprisma = 10

$A_{base} = \frac{15.10}{2} \rightarrow \frac{150}{2} \rightarrow 75m^2$

$Vol = 75.10 \rightarrow 750\,m^2$

6)

dimensões da base: x e y
altura = z
altura total = $4x^2$
$z = 2y$

$A_{total}: 2.a.b + 2ac + 2bc$
$4x^2 = 2xy + 2xz + 2yz$
$\frac{4x^2}{2} = \frac{2(xy + xz + yz)}{2}$
$2x^2 = xy + xz + yz$
$2x^2 = xy + x2y + y2x$
$2x^2 = 3xy + 2y^2$

$2y^2 + 3xy - 2x^2$
$\Delta = (3x)^2 - 4.2.-2x^2$
$\Delta = 9x^2 + 16x^2$
$\Delta = 25x^2$

$y = \frac{-3x \pm \sqrt{25x^2}}{2.2}$

$y_I = \frac{-3x - 5x}{-4} = \frac{2}{-4} = \frac{x}{2}$

$y_{II} = \frac{-3x - 5x}{4} = \frac{-8}{4} = -2$

$z = 2.x \rightarrow x$
$\quad 2$

$Vol = x.y.z$

$Vol = x.x.x/2$

$Vol = x^3/2$ R: C

---

1) Comp: 51 cm
largura: 26 cm
altura: 12,5 cm
espessura: 0,5 cm

$comp\,int = 51 - (2.0,5)$

$comp\,int = 51 - 1$

$comp\,int = 50\,cm$

$larg\,int = 26 - (2.0,5)$

$larg\,int = 26 - 1$

$larg\,int = 25\,cm$

$V\,int = 50.25.12$

$V\,int = 15000\,cm^2$

$cm^3 - m^2$ ↳ $V_m = 0,0\,15\,m^2$

$Alt\,int = 12,5 - 0,5$

$Alt\,int = 12\,cm$

R: A

---

2) $A\,total = 72\,m^2$

$72 = 6a^2$

$72/6 = a^2$

$a^2 = 12$

$a = \sqrt{12}$

$a = \sqrt{2^2.3}$

$a = 2\sqrt{3}$

12	2
6	2
3	3
1	

$diagonal = a\sqrt{3}$

$diagonal = 2.\sqrt{3}.\sqrt{3} \rightarrow 2.3 \rightarrow 6$

R: B

---

3) $a = 50\,cm \xrightarrow{\div 100} a = 0,5$

$Vol = a^3$

$Vol = 0,5^3$

$Vol = 0,125\,m^3$

Vol em litros → $VL = 0,125.1000$

$VL = 125\,L$

R: A

---

4)

$a = 1\,m$

$Vol = a^3$

$Vol = 1\,m^3$

Volume em litros

$VL = 1.1000$

$VL = 1000 \rightarrow -1\,l = 999\,l$

1m — 1000ℓ
(1m - x) - 999ℓ

999ℓ . 1m = 1000ℓ (1m - x)
999 = 1000 - 1000x
-1000x = -1 .(-1)
1000x = 1
x = 1/1000
x = 0,001 m

5)
p = 2cm; 4cm; 5cm (supondo)

V = 24.5
V = 40 cm²

V = 2(4.2).(5.2)
V = 2.8.10
V = 160 cm³

Logo: 160/40 = 4√

R: C

6)
ℓ = 4√3
a = 4√3
Vol P = Vol cubo
h = ?

Vol P = V cubo
A base . h = a³
ℓ²√3 / 4 = a³

A lat = 3.4√3.16
A lat = 192√3

A base = (4√3)² . √3 / 4
A base = 3.√3 / 4
A base = 4.3√3
A base = 12√3

(4√3)² . √3 / 4 . h = (4√3)³

4√3 . h = 4√3 . 4√3 . 4√3

h/4 = 4
h = 4.4
h = 16

A total = 2.12.√3 + 192√3
24√3 + 192√3 → 216√3 cm²

216√3 cm²
R: D