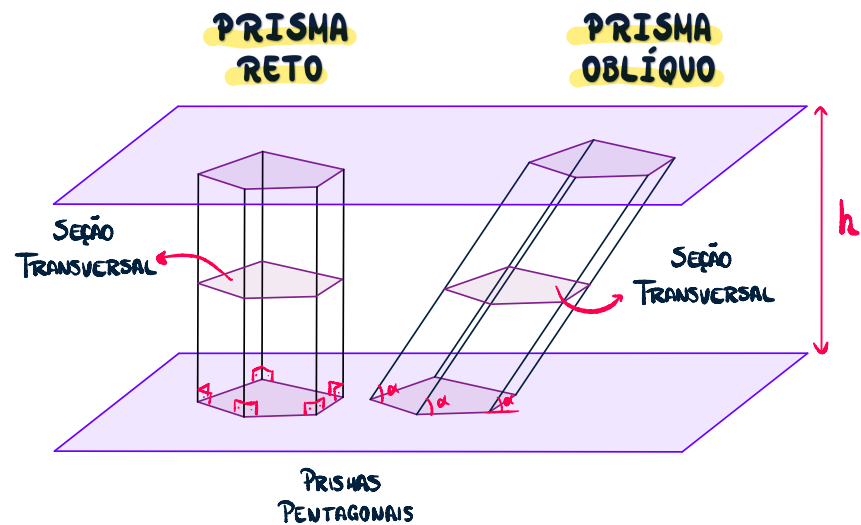


GEOMETRIA ESPACIAL - PRISMAS

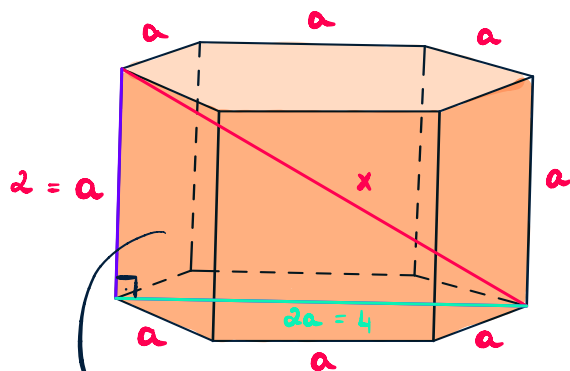


ÁREA DA BASE: A_b
 ÁREA LATERAL: A_L
 ÁREA TOTAL: $A_T = A_L + 2A_b$

$$V = A_b \cdot h$$

RETO
 → POLÍGONO BASE REGULAR

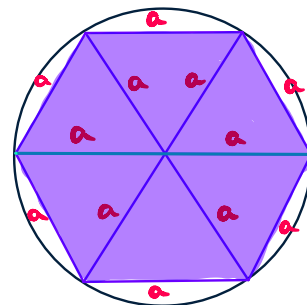
PRISMA HEXAGONAL REGULAR. TODAS AS ARESTAS IGUAIS. VOLUME $12\sqrt{3}$
 QUANTO MEDE A MAIOR DIAGONAL?



$$x^2 = 2^2 + 4^2$$

$$x^2 = 20$$

$$x = 2\sqrt{5}$$



$$A_b = 6 \cdot A_{\Delta E O}$$

$$A_b = 6 \cdot \frac{a^2 \sqrt{3}}{4} = \frac{3a^2 \sqrt{3}}{2}$$

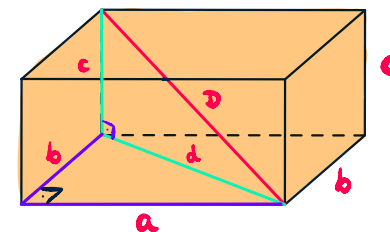
$$V = \frac{3a^2 \sqrt{3}}{2} \cdot a$$

$$12\sqrt{3} = \frac{3a^3 \sqrt{3}}{2}$$

$$8 = a^3$$

$$a = 2$$

PARALELEPÍPEDO RETO RETÂNGULO



$$d^2 = a^2 + b^2$$

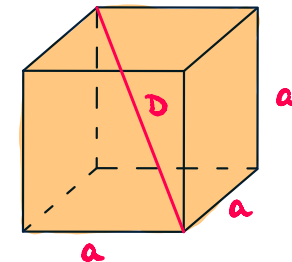
$$D^2 = d^2 + c^2$$

$$D^2 = a^2 + b^2 + c^2$$

$$V = a \cdot b \cdot c$$

$$D = \sqrt{a^2 + b^2 + c^2}$$

CUBO



$$V = a^3$$

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

$$D = \sqrt{a^2 + a^2 + a^2}$$

$$D = \sqrt{3a^2}$$

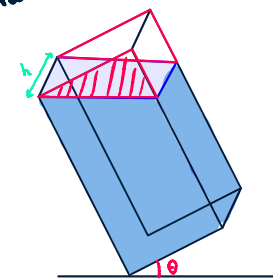
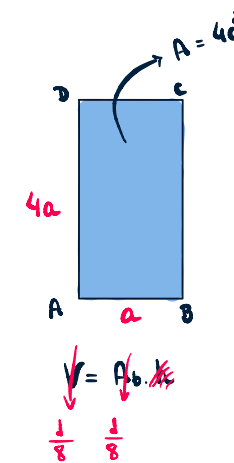
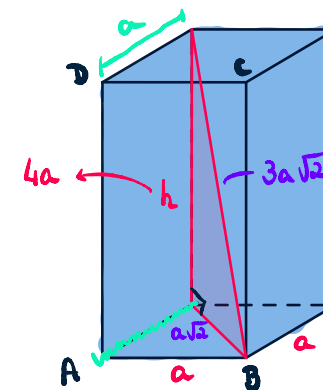
$$D = a\sqrt{3}$$

UNIVERSO NARRADO (2023) #24412

Um recipiente no formato de paralelepípedo reto de base quadrada, sem tampa, está completamente cheio de água. A razão entre sua diagonal e a diagonal da base é 3.

Lentamente, inclina-se esse recipiente, com uma de suas arestas da base apoiada sobre a superfície, de modo que 1/8 da água seja derramada. Assim, qual foi o ângulo de inclinação?

- a) 15°
- b) 30°
- c) 45°
- d) 60°
- e) 75°



$$\frac{1}{8} 4a^2 = \frac{a^2}{2}$$

$$x \cdot a \cdot \frac{1}{2} \cdot x = \frac{a^2}{2}$$

$$x = a$$

$$\text{tg } \theta = \frac{a}{a} = 1$$

$$\theta = 45^\circ$$

$$(3a\sqrt{2})^2 = (a\sqrt{2})^2 + h^2$$

$$18a^2 = 2a^2 + h^2$$

$$h^2 = 16a^2$$

$$h = 4a$$



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