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1.

V = πr² \* h

V = π10² \* 40

V = 4000π

4000π / 5 = 800π

v = π5² \* h

π5² \* h = 800π

5² \* h = 800

25h = 800

**h = 800/25 = 32 cm (A)**

2.

V1 / V2 = 1/27

πr1² \* h / πr2² \* h = 1/27

πr1² \* 2r / πr2² \* 16r = 1/27

πr³ \* 2 / πr³ \* 16 = 1/27

r³2 / r³16 = 1 / 27

r³ / r³8 = 1/27

(r1 / r2)³ = 8/27

r1 / r2 =

**r1 / r2 = 2/3 (E)**

3.

2π \* 3r/2 \* h = 2π \* r \* h + 2π \* r²

3π \* r \* h = 2π \* r \* h + 2π \* r²

π \* r \* h = 2π \* r²

h = 2r

π \* r² \* h = 16π

h = 16/r²

como h é = 2r

16/r² = 2r

16 = 2r \* 2²

16 = 2r³

r³ = 16/2

r³ = 8

r =

r = 2

π \* 2² \* h = 16π

π \* 4 \* h = 16π

h = 16π/4π

**h = 4 (D)**

4.

V = πr² \* 4

π \* (r+12)² \* 4 = π \* r² \* (4+12)

π \* (r² + 24 r + 144) \* 4 = π \* r² \* 16

π \* (4r² + 96r + 576) = π \* 16 \* r²

4r² + 96r + 576 = 16r²

12r² - 96r - 576 = 0

Simplificando tudo por 12

r² - 8r - 48 = 0

delta = 8² - 4 \* 1 \* - 48

delta = 64 + 192

delta = 256

x1 = 8 + / 2\*1 → x1 = 8 + 16 / 2 → **x1 = 12 (A)**

x2 = 8 - / 2\*1 → x2 = 8 - 16 / 2 → x2 = -4 (não serve)

5.

0,8 mm = 0,08 cm

Ab = πR² → Ab = π20² → Ab = 400π cm²

V = S.H → V = (400π).0,08 → V = 32π → **V ~= 100,5 cm³ (B)**

1.

Ab = bh

Ab = x \* 2x

Ab = 2x²

V = Ab \* h / 3

48 = 2x² \* 8 / 3

144 = 16x²

x² = 144/16

x² = 9

**x = = 3 (C)**

2.

b = 80²

b = 6400

h² = 40² + 30²

simplificando vira um triângulo 3, 4, 5

h = 50

a = b\*h/2

a = 80\*50/2

a = 40 \* 50 = 2000

At = n\*a + b

At = 4 \* 2000 + 6400

At = 8000 + 6400

**At = 14400 (E)**

3.

Diagonal da base = \* = 2

² = h² + (2/2)²

2 = h² + 1

h =

**h = 1 (C)**

4.

Aresta da base = a

h = b

Abase = 6a² / 4

Abase = 3a² / 4

V = Ab \* h / 3

V = b \* 3a² / 4 / 3

V = 3b \* 3a² / 4 / 3

V = 3b \* 3a² / 4 \* 1 / 3

V = 3b \* 3a² / 12

V = 9a²b / 12

**V = 3a²b / 4 (A)**

5.

M = 4 / 2 = 2

S = 4 \* 2/2 = 4

St = 6 \* 4 = 24

V = 1/3 \* 24 \* 6

V = 1/3 \* 144 \* 3

**V = 144 cm³ (D)**

6.

Como o perímetro é 6, cada aresta da base mede 1 cm

Ab = 6 \* 1² / 4

Ab = 6 / 4

Ab = 3 / 2

V = 1/3 \* 8 \* 3 / 2

V = 1 \* 8 / 2

**V = 4 cm³ (A)**

7.

B = 2a

V = B² \* h / 3

V = (2a)² \* h / 3

V1 = 4a² \* h / 3

V = Ab \* h

V2 = a² \* h

Razão = 4a² \* h1 / 3 / a² \* h2

Razão = 4a² \* h1 / 3 \* 1 / a² \* h2

Razão = 4a² \* h1 / 3a² \* h2

Razão → 4a² \* h1 / h2 = 3a²

Razão → h1 / h2 = 3a² / 4a²

**Razão = 3/4 (A)**

8.

At = a²

6 = a²

6 = a²

a =

h = a \* / 3

h = \* / 3

h = 6 / 3

**h = 2 cm (A)**