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1.

2πr/2 =

2π20/2 =

40π / 2 = 20π

(20)²π/2 = πr \* 20

400π/2 = 20πr

200π = 20πr

r = 10

20² = 10² + h²

400 = 100 + h²

300 = h²

h =

fatorando

**h = 10 (A)**

2.

V = b\*h/3

64π = πr² \* 12/3

64 = r² \* 4

64/4 = r²

16 = r²

r = = 4

g² = 4² + 12²

g² = 16 + 144

g² = 160

g =

fatorando

**g = 4 (B)**

3.

Rb = h

Ab = 36π

Area base = πr²

36π = πr²

r² = 36

r = = 6

V=1/3hπr²

V = 6π6²/3

V = 6π36/3

V = 2π36

**V = 72π (A)**

4.

V = 2πR²h

V = 2π(a/2)²(a/2)

V = 2π cm³

5.

Vcilindro = 10π3²

Vcone = 1²\*3/3

V = 1/2 \* Vcilindro – Vcone

V = 1/2 \* 10π3² - 1²\*3π/3

V = 1/2 \* 90π – 1π

V = 45π - 1π

**V = 44π (E)**

6.

Vp / Vc = b \* 2/3h / 1/3b \* h

Vp / Vc = 2h/3 / h/3

Vp / Vc = 6h / 3h

**Vp / Vc = 2 (A)**

7.

Vabc = Vcone = 1/3πr²h

Vadc = Vcilindro – Vcone

Vadc = πr²h – 1/3 πr²h

Vadc = 2/3πr²h

Razão = 1/3πr²h / 2/3πr²h

Razão = 1/3 / 2/3

**Razão = 1/2 (E)**

1.

V = 12π cm³

V/v = 8³/h³

24π/12π = 512 / h³

2 = 512 / h³

2h³ = 512

h³ = 256

h =

fatorando

**h = 4 cm (E)**

2.

20 = 4 + x

x = 16

Vl / Vt = (16/20)³

Vl / Vt = (4/5)³

Vl / Vt = 64 / 125

Vl / Vt = 0,512 = 51,2%

100% = 51,2% - Vespuma

100% - 51,2% = Vespuma

**Vespuma ≈ 48,8% (C)**

3.

r = raio do cone meno

R = raio do cone maior

R/H = r/h

r = Rh/H

VC = πR²H/3

Vc = π(Rh/H)²h/3

Vc = πR²h³/3H²

Vt = VC – Vc

Vt = πR²H/3 - πR²h³/3H²

Vt = πR²(H³-h³)/3H²

πR²h³/3H² = πR²(H³-h³)/3H²

πR²h³ = πR²(H³-h³)

h³ = H³ - h³

2h² = H³

h³ = H³/2

h = /

racionalizando

h = / \* /

**h = H / 2 (A)**

4.

g² = h² + (A - a)²

5² = h² + (8 - 5)²

25 = h² + 3²

25 = h² + 9

25 – 9 = h²

h = √16

**h = 4 cm**

5.

V = (π \* h/3) \* [R² + (R \* r) + r²]

V = (π \* 4/3) \* [5² + (5 \* 2) + 2²]

V = (π \* 4/3) \* (25 + 10 + 4)

V = (π \* 4/3) \* 39

V = π \* 4 \* 39/3

V = π \* 156/3

V = 52 π m³

At = AB + Ab + Al

AB = π \* R²

AB = π \* 5²

AB = 25π m²

Ab = π \* r²

Ab = π \* 2²

Ab = 4π m²

g² = h² + (R - r)²

g² = 4² + (5 - 2)²

g² = 16 + 3²

g² = 16 + 9

g = √25

g = 5 m

Al = π \* g \* (R + r)

Al = π \* 5 \* (5 + 2)

Al = π \* 5 \* 7

Al = 35π m²

At = AB + Ab + Al

At = 25π + 4π + 35π

**At = 64π m² (C)**

6.

g² = h² + (R - r)²

5² = h² + (7 - 3)²

25 = h² + 4²

25 = h² + 16

25 – 16 = h²

h² = 9

h = √9

h = 3 m

V = (π \* h/3) \* [R² + (R \* r) + r²]

V = (π \* 3/3) \* [7² + (7 \* 3) + 3²]

V = π \* (49 + 21 + 9)

**V = 79 π cm³ (D)**

7.

r = raio do cone meno

R = raio do cone maior

R/H = r/h

r = Rh/H

VC = πR²H/3

Vc = π(Rh/H)²h/3

Vc = πR²h³/3H²

Vt = VC – Vc

Vt = πR²H/3 - πR²h³/3H²

Vt = πR²(H³-h³)/3H²

πR²h³/3H² = πR²(H³-h³)/3H²

πR²h³ = πR²(H³-h³)

h³ = H³ - h³

2h² = H³

h³ = H³/2

h = /

racionalizando

h = / \* /

**h = H / 2 (A)**