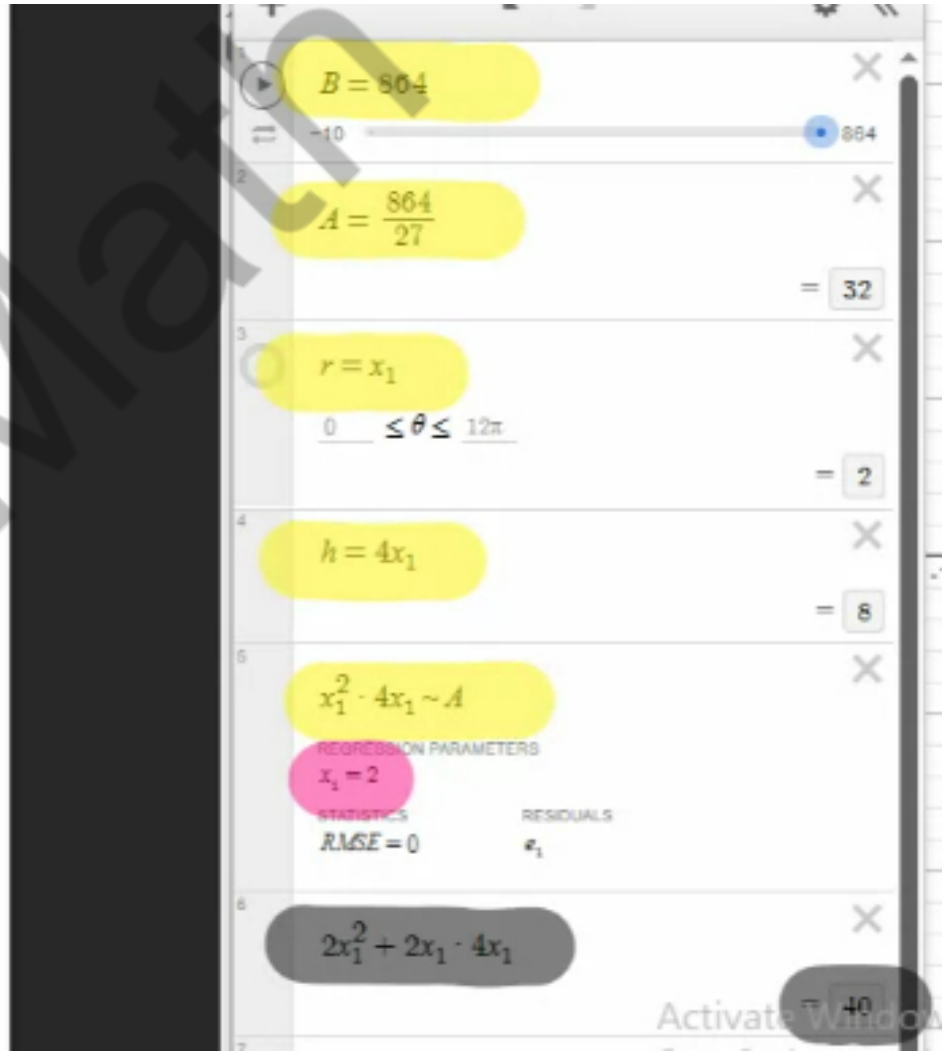
The cylinders A and B are similar. The internal radius and height of cylinder A is r and h, respectively, such that h = 4r. The volume of cylinder B is 864π which is 27 times greater than the volume of cylinder A. If the surface area of A is Mπ, what is the value of M?

A) 40

B) 36

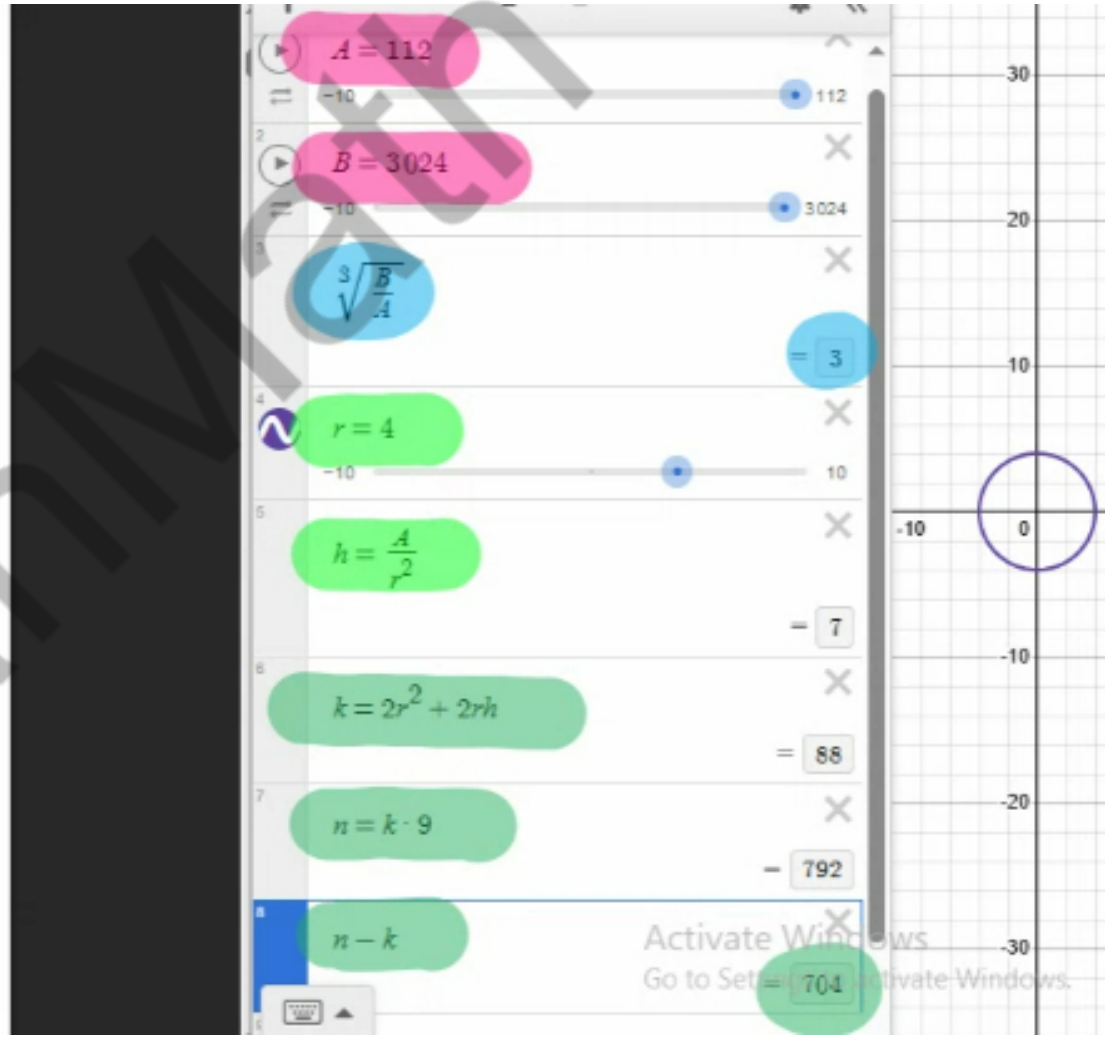


OrxanMath

	(cubic units)
Right circular cylinder A	112π
Right circular cylinder B	$3{,}024\pi$

The table shows the volume of two similar solids, right circular cylinder A and right circular cylinder B. The radius of right circular cylinder A is 4 units. The surface area of right circular cylinder A is $k\pi$ square units, and the surface area of right circular cylinder B is $n\pi$ square units, where k and n are constants. What is the value of n - k? (The surface area of a right circular cylinder with radius r and height h is $2\pi r^2 + 2\pi rh$.)

704

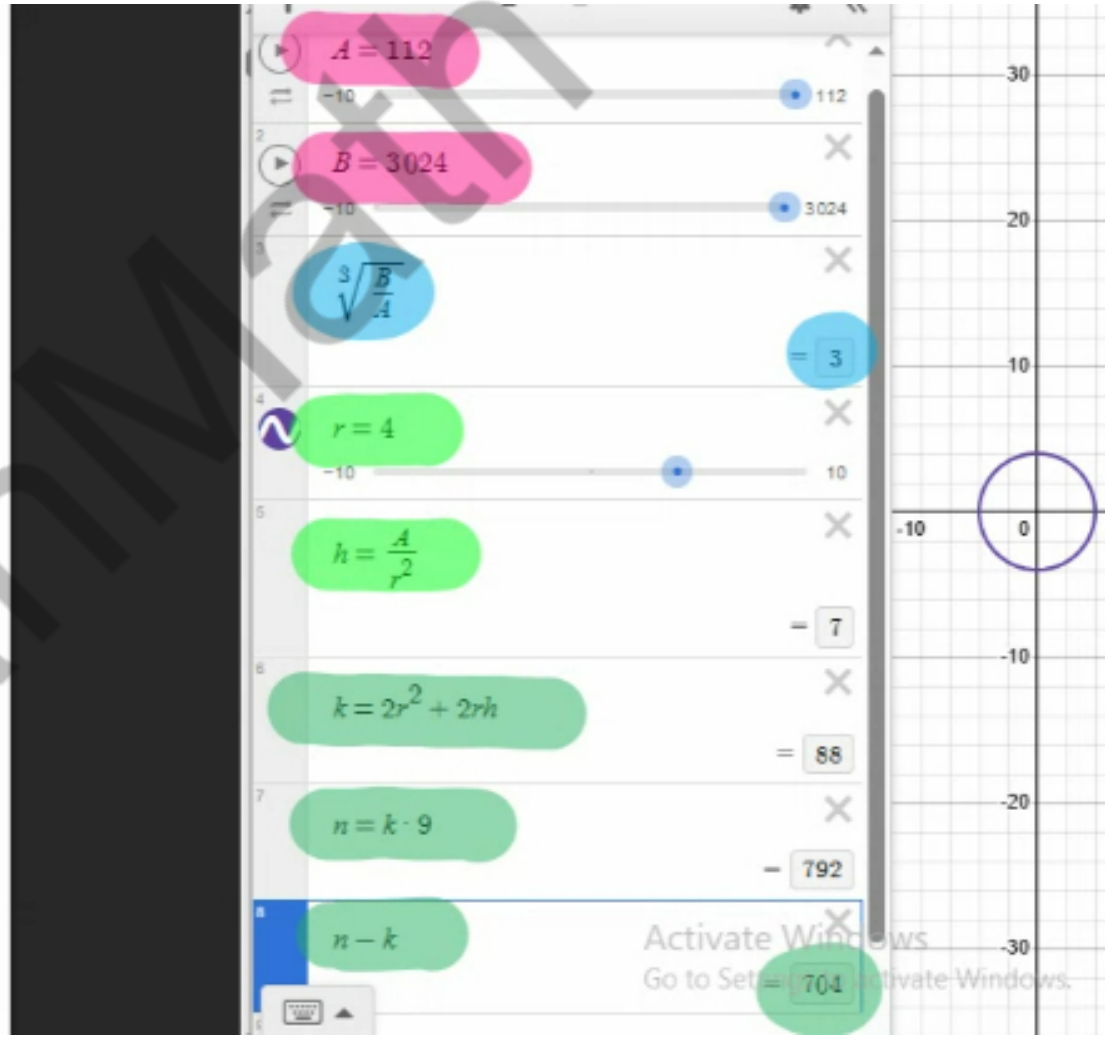


Orxan Math

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704



Orxan Math

Right rectangular prism X is similar to right rectangular prism Y. The surface area of right rectangular prism X is 58 square centimeters (cm^2), and the surface area of right rectangular prism Y is 1,450 cm^2. The volume of right rectangular prism Y is 1,500 cubic centimeters (cm^3). What is the sum of the volumes, in cm^3, of right rectangular prism X and right rectangular prism Y?

512

$1500+12=1512$

1 $X = 58$

−10 58

2 $Y = 1450$

−10 1450

3 $\sqrt{\frac{Y}{X}}$

$= 5$

4 $1500 + \frac{1500}{5^3}$

$- 1512$

5

-10

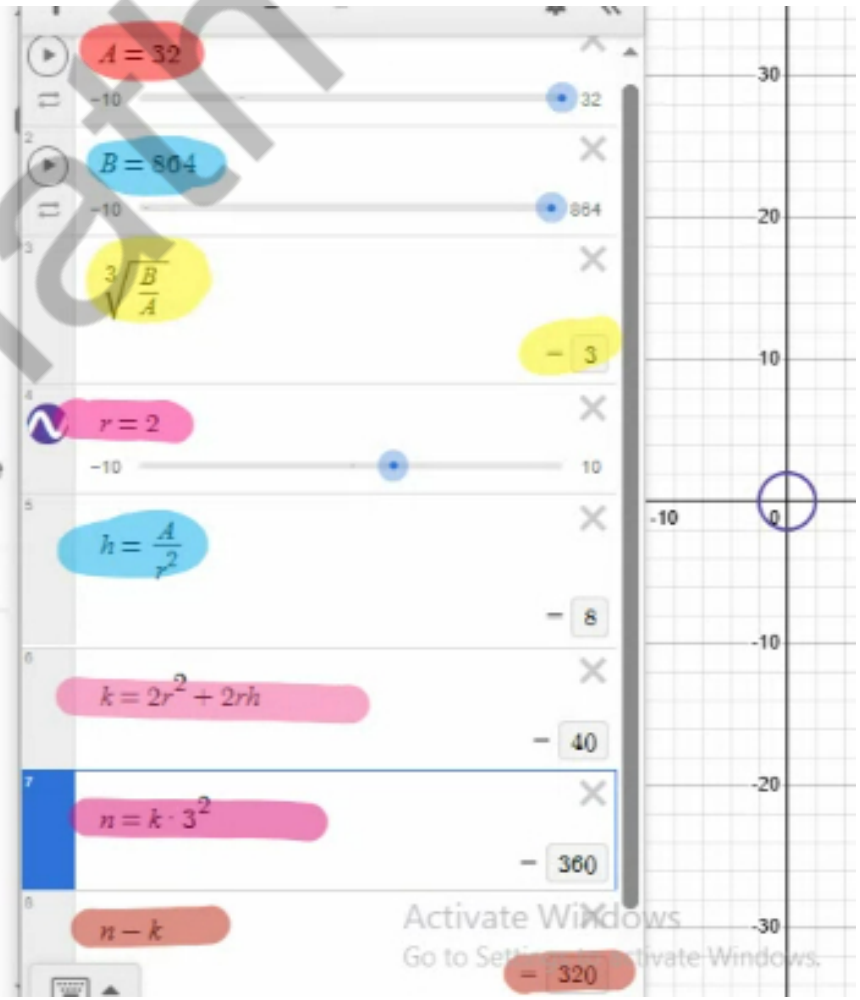
OrxanMath

	Volume (cubic units)
Right circular cylinder A	32π
Right circular cylinder B	864π

The table shows the volume of two similar solids, right circular cylinder A and right circular cylinder B. The radius of right circular cylinder A is 2 units. The surface area of right circular cylinder A is $k\pi$ square units, and the surface area of right circular cylinder B is $n\pi$ square units, where k and n are constants. What is the value of $n - k$? (The surface area of a right circular cylinder with radius r and height h is $2\pi r^2 + 2\pi rh$.)

320

320



OrxanMath

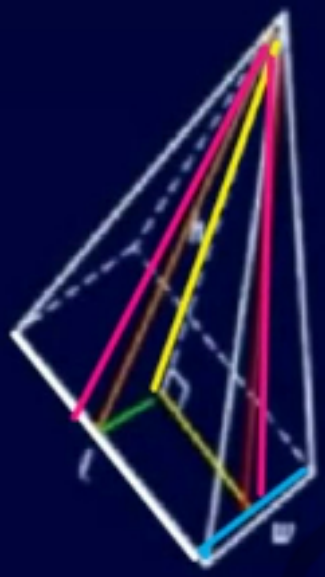
13.

l=18

w=9

h=12

527.7



slant 1

slant 2

Note: Figure not drawn to scale.

The figure shown is a right rectangular pyramid, where $l = 18$ units, $w = 9$ units, $h = 12$ units. What is the surface area, in square units, of the pyramid?

$l = 18$

$w = 9$

$h = 12$

$B = lw$

$= 162$

$a = \sqrt{h^2 + \left(\frac{l}{2}\right)^2}$

$= 15$

$b = \sqrt{h^2 + \left(\frac{w}{2}\right)^2}$

$= 12.816005618$

$B + 2 \cdot l \cdot \frac{b}{2} + 2 \cdot w \cdot \frac{a}{2}$

$= 327.688101124$

Activate Windows

97. Orkhan Khalilzade

The table gives the volume and surface areas of two similar rectangular prisms, where k is a constant.

	Volume (cubic inches)	Surface Area (square inches)
Rectangular Prism A	4,374	1,782
Rectangular Prism B	1,500,282	k

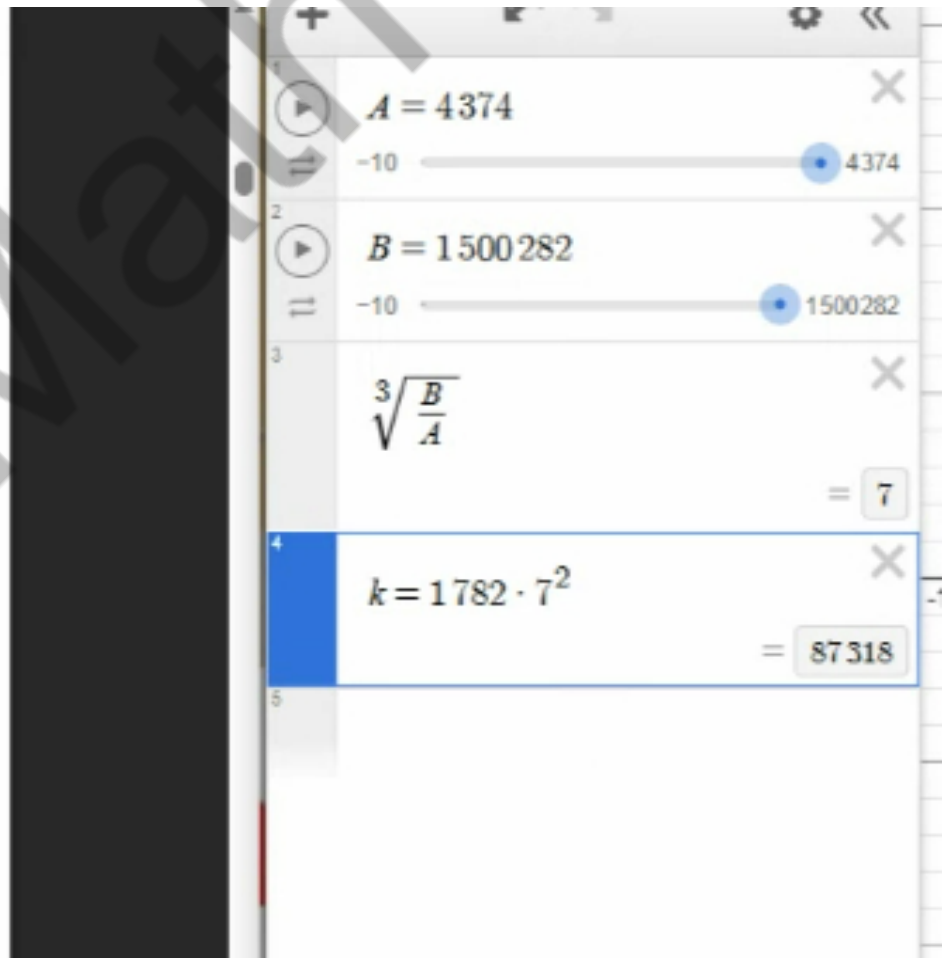
What is the value of k ?

A) 5,346

B) 12,474

C) 87,318

D) 611,226

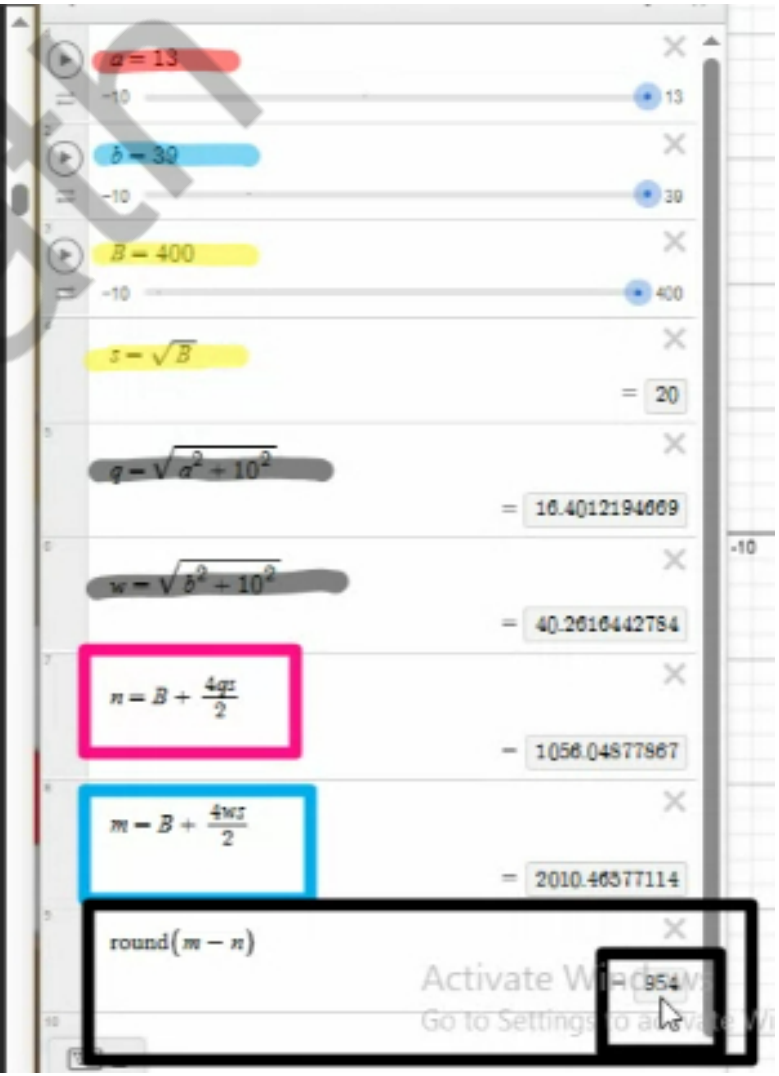


OrxanMath

nov-mod2-22

A right square pyramid has a height of 13 inches. A second right square pyramid has a height 39 inches. The area of the bases of the two pyramids is 400 square inches. Which of the following is closest to the difference in surface area of the second pyramid and the surface area of the first pyramid, in square inches, rounded to the nearest integer?

954



OrxanMath

22 Mark for Review

A right square pyramid has a total surface area of 36,864 square inches, and the combined surface area of the four lateral faces of this pyramid is 20,480 square inches. What is the height, in inches, of this pyramid?

48

$t = 36864$

$l = 20480$

$b = t - l$

$= 16384$

$s = \sqrt{b}$

$= 128$

$\frac{4ks}{2} \sim l$

$k = 80$

STATISTICS

$RMSE = 0$

RESIDUALS

$h \sqrt{k^2 - \left(\frac{s}{2}\right)^2}$

$= 48$

Highest scoring service
OrxanMath
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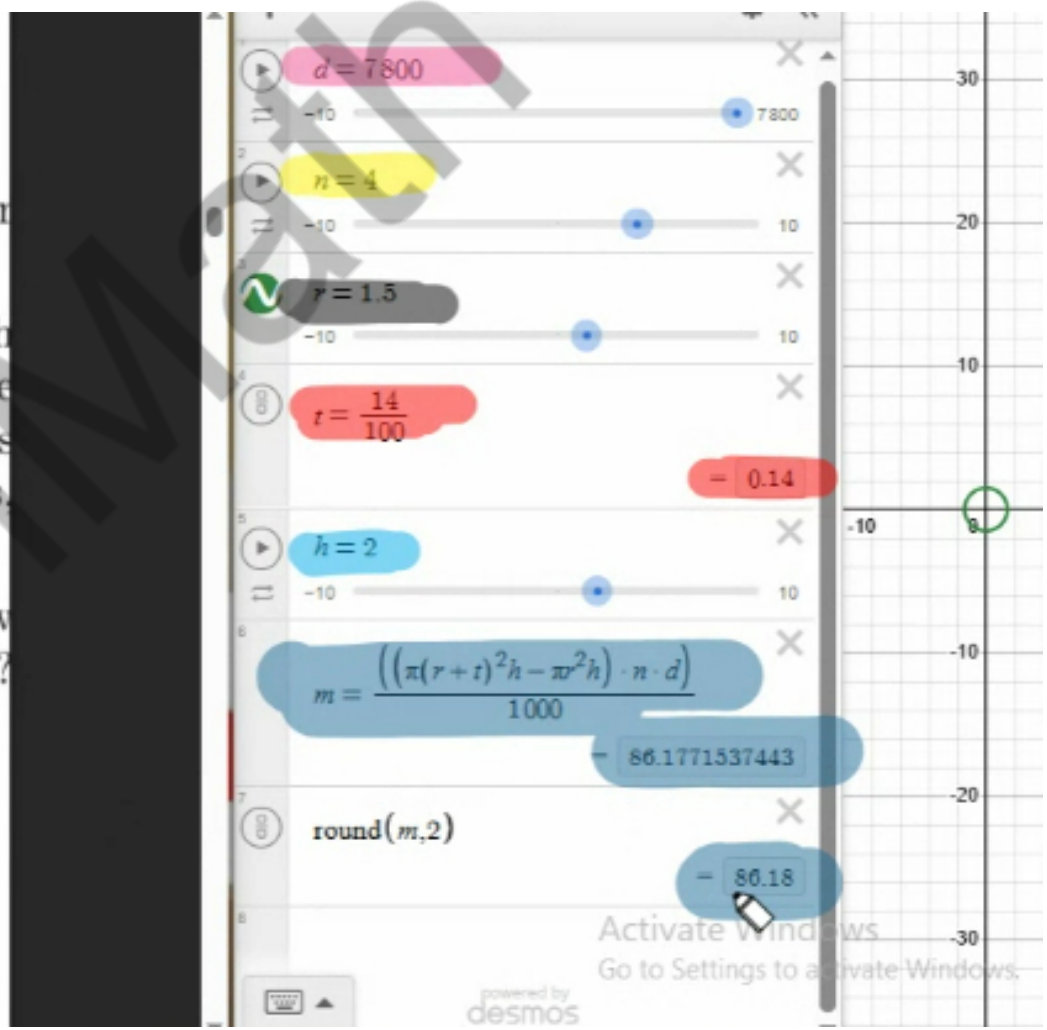
The density of stainless-steel is 7,800 kilograms per cubic meter.

A hollow-cylindrical shaped stainless-steel bar with an internal radius of 1.5 meters is used for supportive reasons under the bridge over the river. The thickness and the length of one bar are 14 cm and 2 meters, respectively.

If 4 equal-sized bars are used for the bridge, how many tonnes of stainless steel are used for the bridge? (Round your answer to the nearest hundreds)

4*





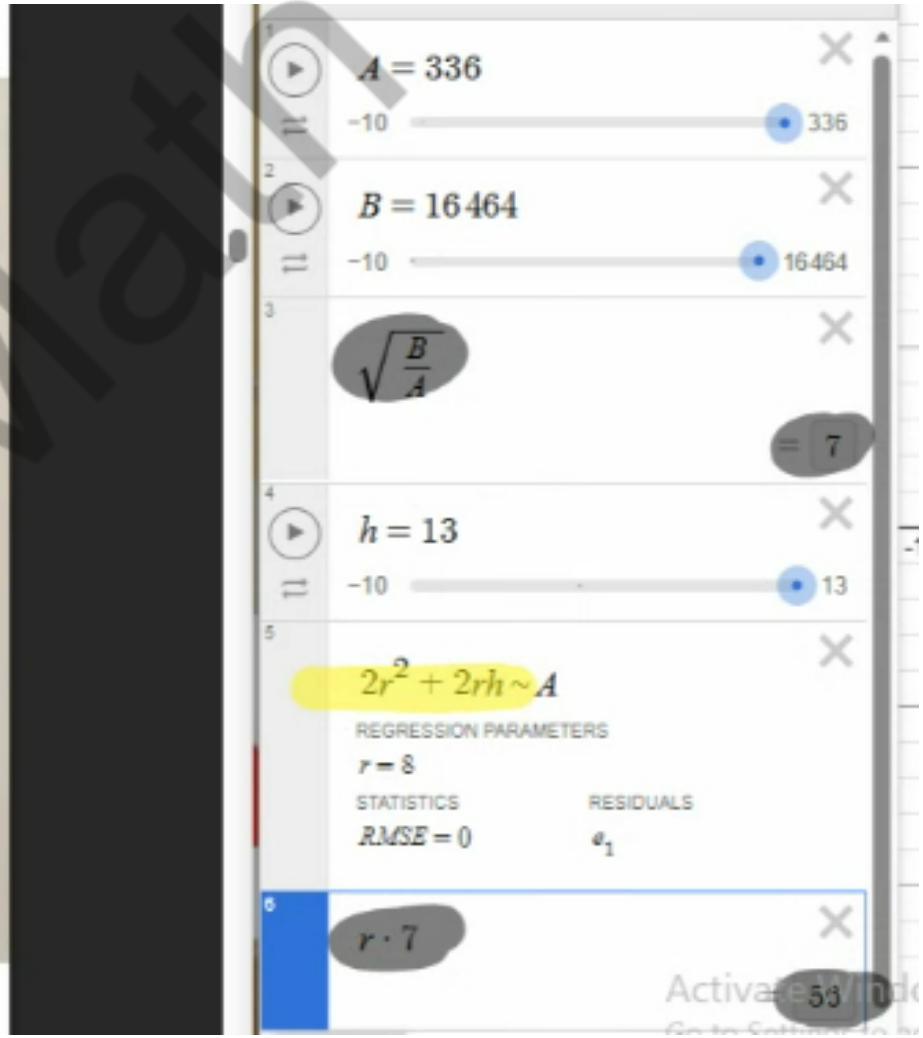
Oryan Math


V=1/3* Base area* height
The edge length of the square base and the height of a right square pyramid are integers, and the pyramid has a volume of 16,464 cubic inches. If the slant height is 35 inches, what is the height, in inches, of this pyramid?
side ;length of base
vertical height
V = 16464
-10
16464
k = 35
-10
35
REGRESSION PARAMETERS
x1 = 42
STATISTICS
RMSE = 0
RESIDUALS
ε1
√(k^2 − 21^2)
= 28
30
20
10
-10
0
-10
-20

Cylinder	Surface Area
A	336π
B	16464π

56

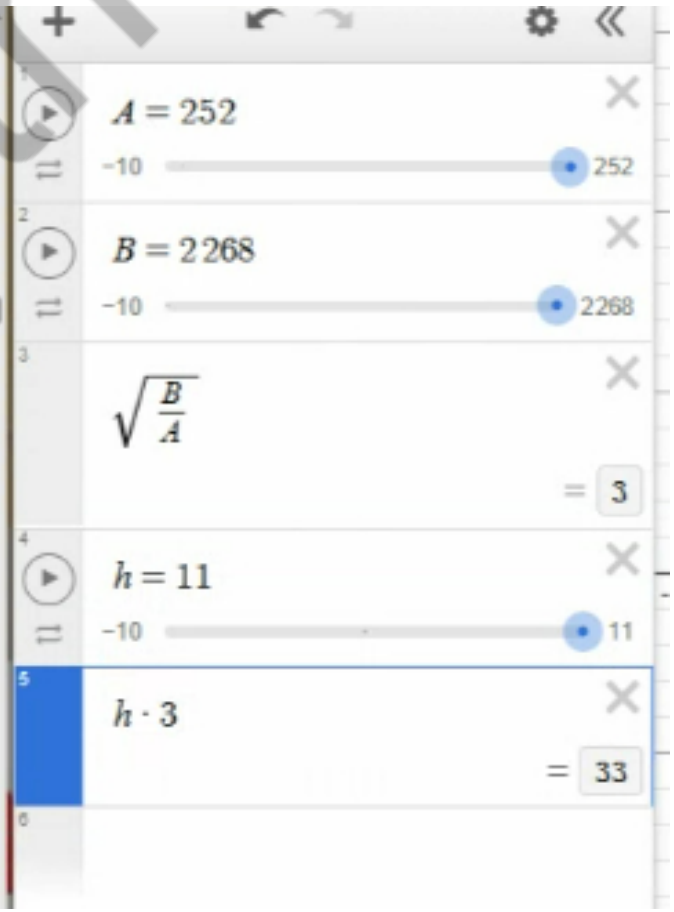
The cylinder A and B are similar. If the height of cylinder A is 13, what is the radius of cylinder B?



OrKanMath

Cylinder	Surface Area
A	252π
B	2268π

The cylinder A and B are similar. If the height of cylinder A is 11, what is the height of cylinder B?



OrxanMath

Cylinder	Surface Area
A	120π
B	9720π

The cylinder A and B are similar. If the height of cylinder A is 7 and the volume of B is $M\pi$, what is the value of M?

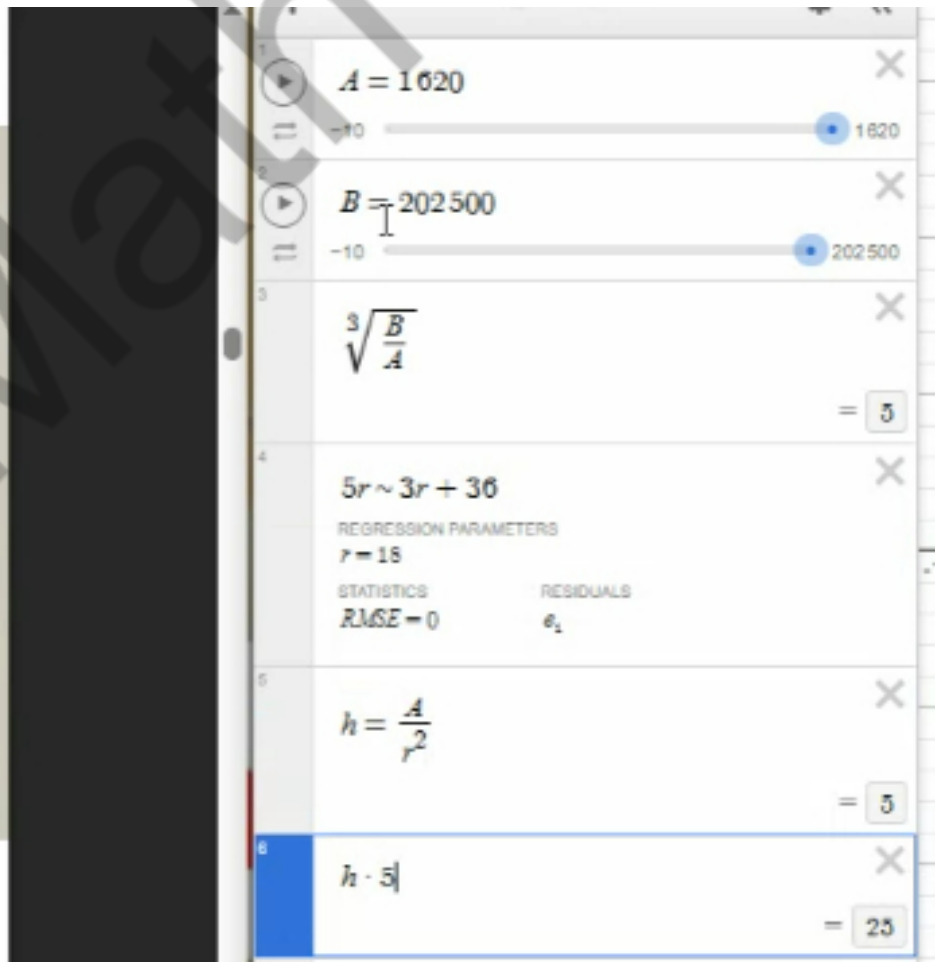


OrYanMath

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	Volume	Radius
A	1620π	R
B	$202{,}500\pi$	$3R + 36$

The cylinder A and B are similar. What is the height of the cylinder B?



OrxanMath

	Radius	Height
A	12	H
B	36	H + 24

46656

The cylinder A and B are similar. If the volume of cylinder B is Mπ, what is the value of M?

$n = \frac{36}{12}$

$= 3$

$h \cdot n \sim h + 24$

REGRESSION PARAMETERS

$h = 12$

STATISTICS

$RMSE = 0$

RESIDUALS

e_1

$r = 12$

-10 12

$v = r^2 h$

$= 1728$

$V = v \cdot n^3$

$= 46656$

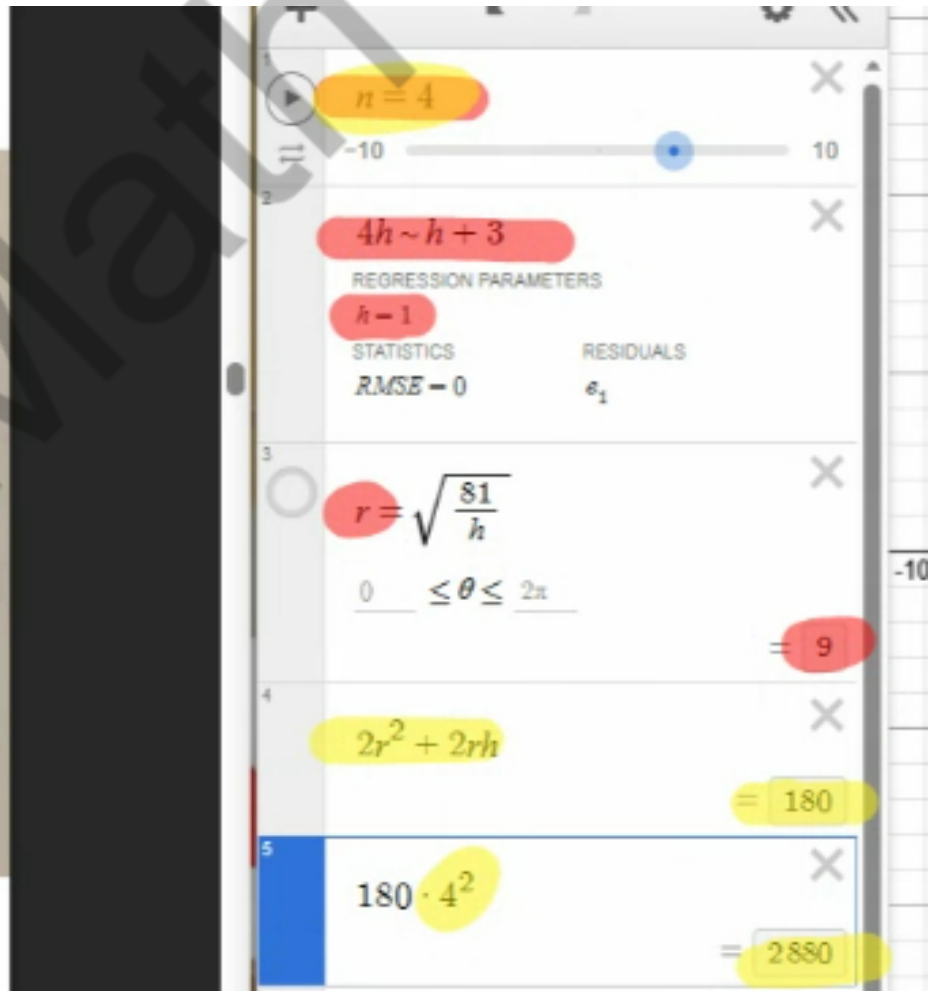
-10

Orxanmath

	Radius	Height
A	R	H
B	4R	H + 3

2880

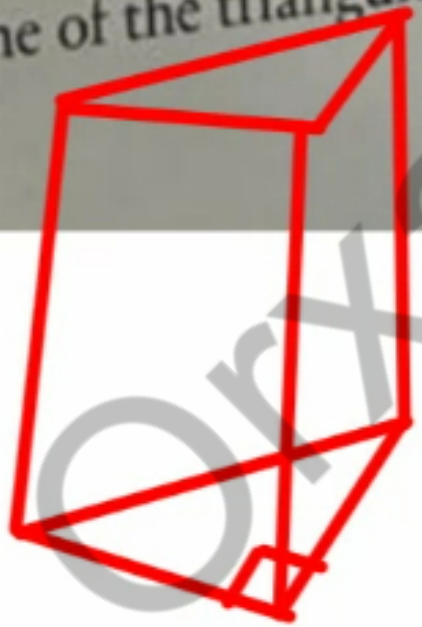
The cylinder A and B are similar. If the volume of A is 81π and the surface of B is Mπ, what is the value of M?



OrxanMath

The base of triangular prism is a right triangle which has sides 8 cm, 15 cm, and 17 cm. If the height of the prism is 10 cm, what is the volume of the triangular prism, in cm^3?

V=base*h



$B = 8 \cdot \frac{15}{2}$

$= 60$

$h = 10$

-10 10

$V = Bh$

$= 600$

OrxanMath

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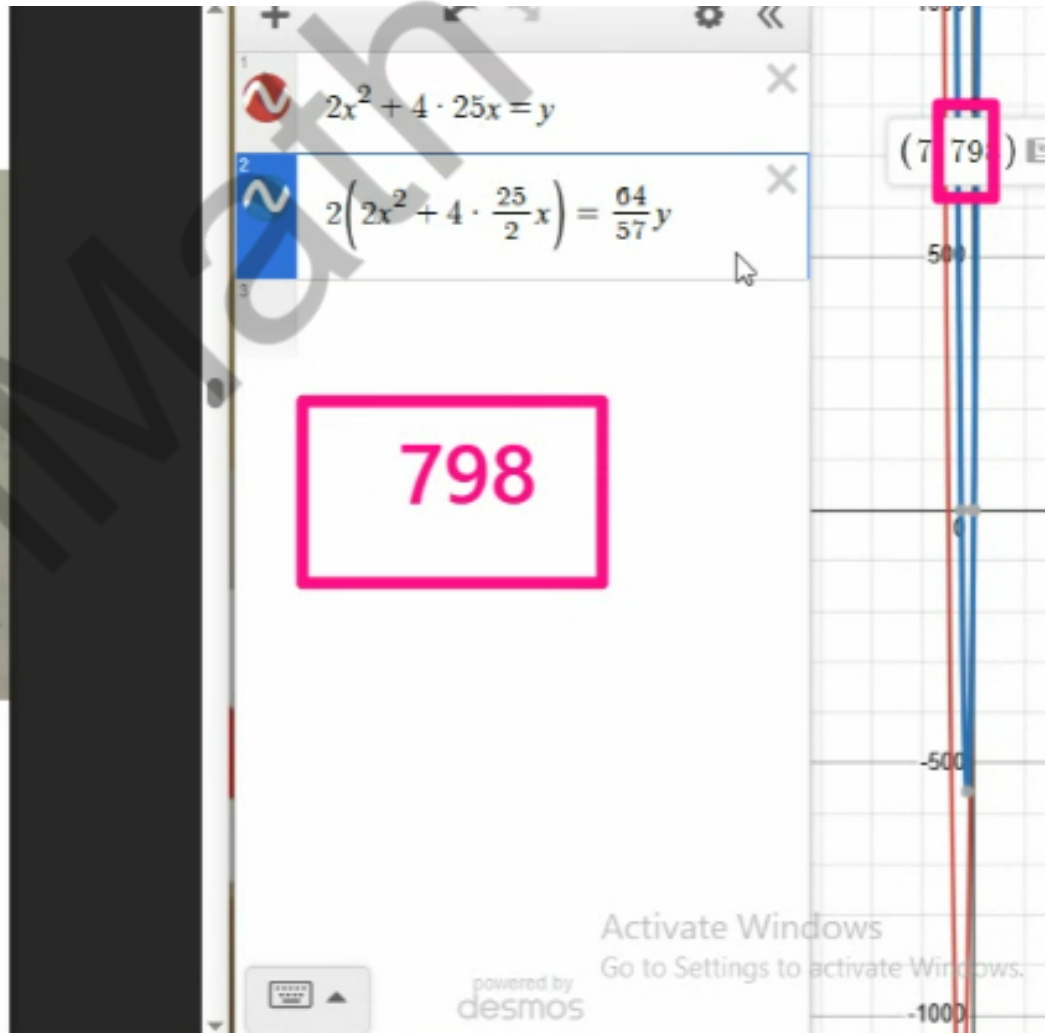


25/2

A square base rectangular prism has height of 25 cm and surface area of the prism is A cm^2. It is divided into two identical prisms which have height of half of the height of original prism. If total surface area of the two new identical prism is $\frac{64}{57}$A cm, what is the value of A?

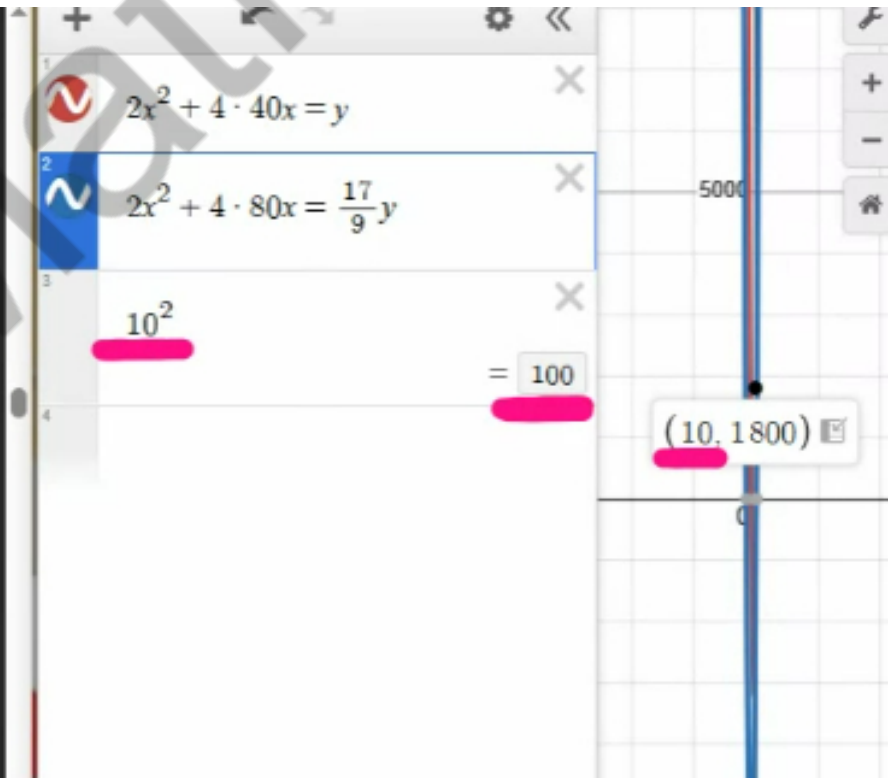


25



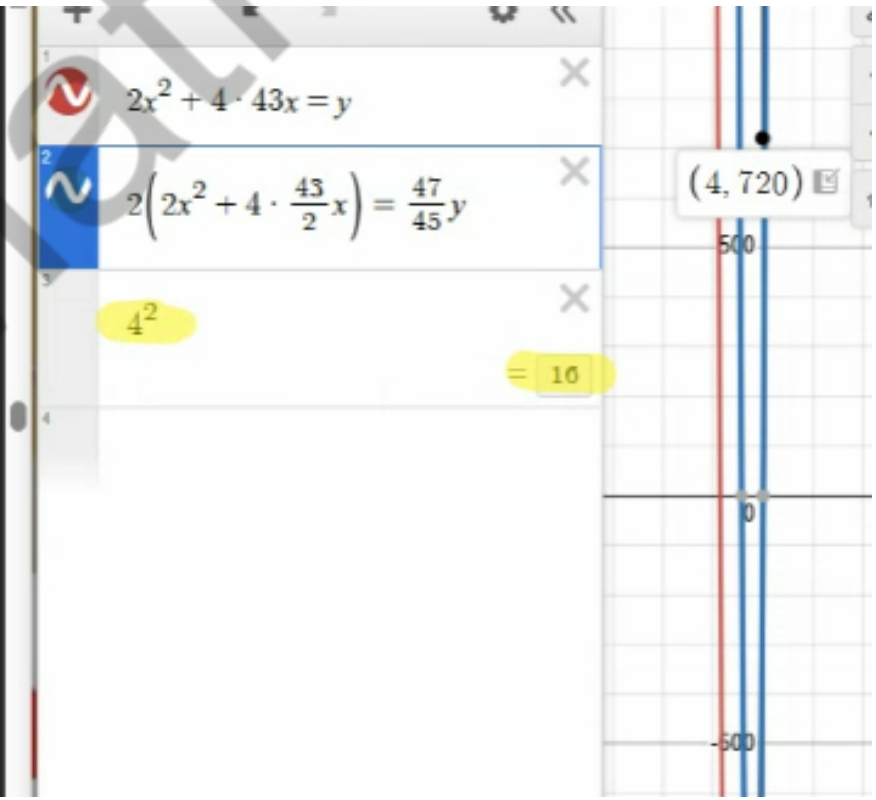
eXamMath

Two square base rectangular prisms have height of 40 and surface area of each prism is B cm^2.They were glues each other from bottom such that they fit each other. Total surface area of the new prism is $\frac{17}{9}$B, what is the area of the base of original prism, in cm^2?



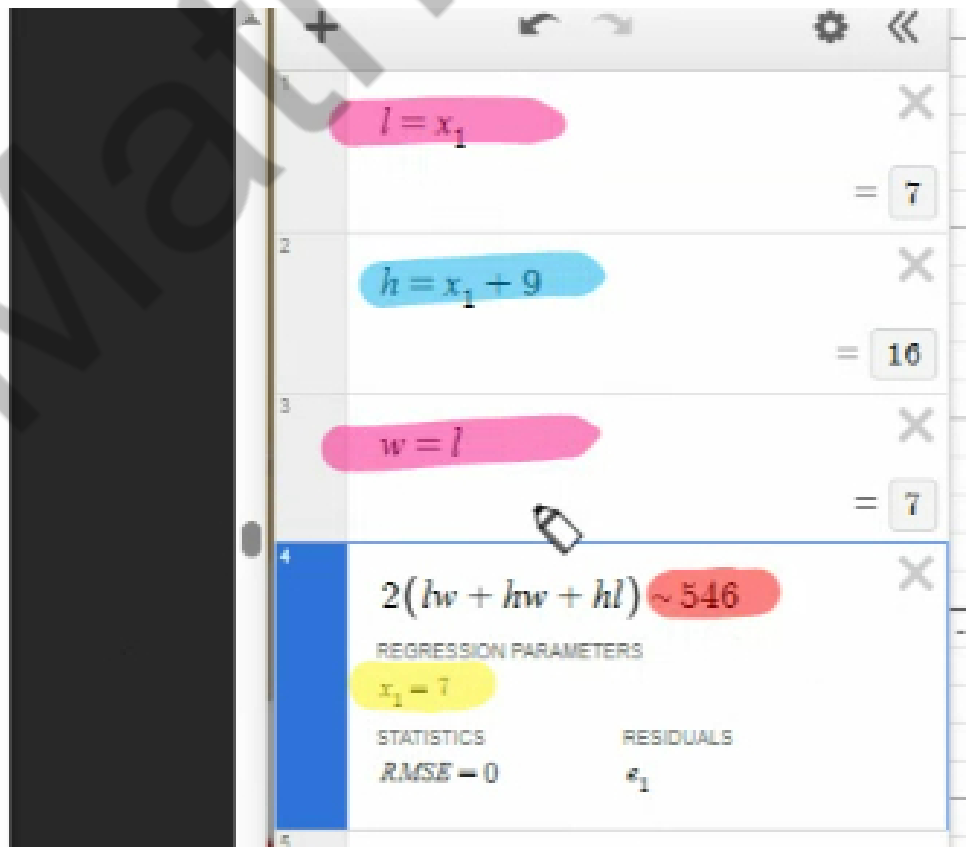
Orxan Math

A square base rectangular prism has height of 43 cm and surface area of the prism is A cm^2. It is divided into two identical prisms which have height of half of the height of original prism. If total surface area of the two new identical prism is $\frac{47}{45}$A cm^2, what is the area of the base of original prism, in cm^2?



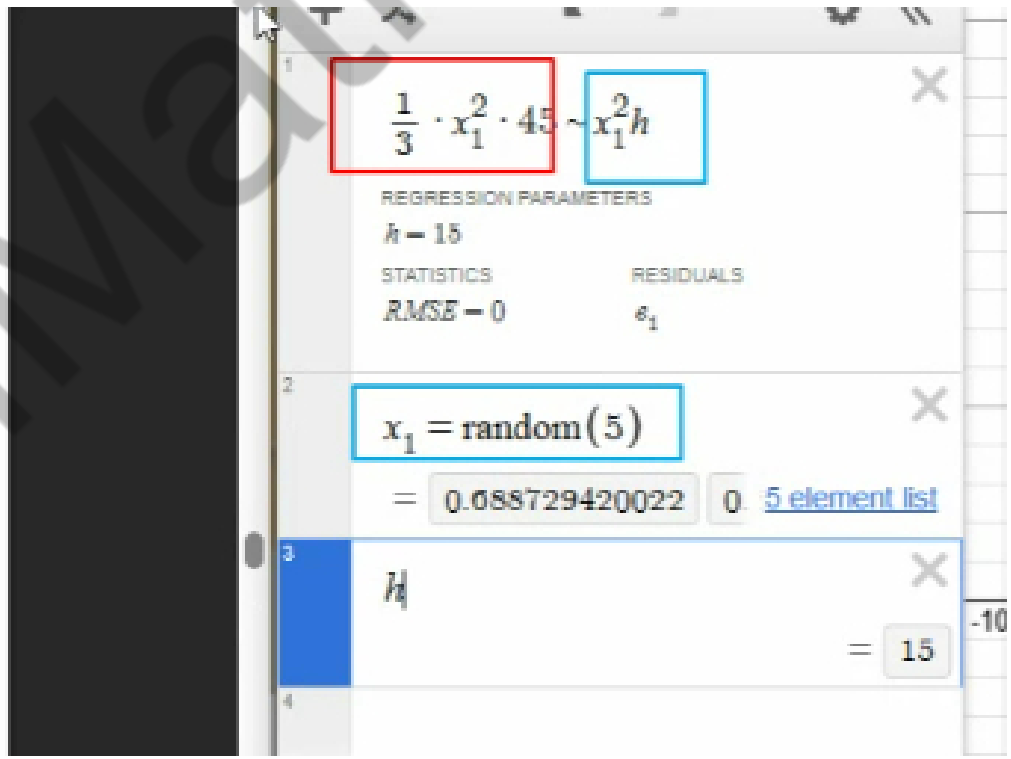
Orxan Math

The height of the square base rectangular prism is 9 cm longer than the length of the base. If the surface area of the rectangle is 546 cm^2, what is the length of the base, in cm?



OrxanMath

The internal radii of a cone and cylinder are equal. If the volumes are also equal and the height of the cone is 45 cm, what is the height of the cylinder, in cm?



OryanMath

The lateral surface area and total surface area of the square base right pyramid area 2880 cm^2 and 5184 cm^2. What is the volume of the pyramid, in cm^3?

13824



OrxanMath

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A

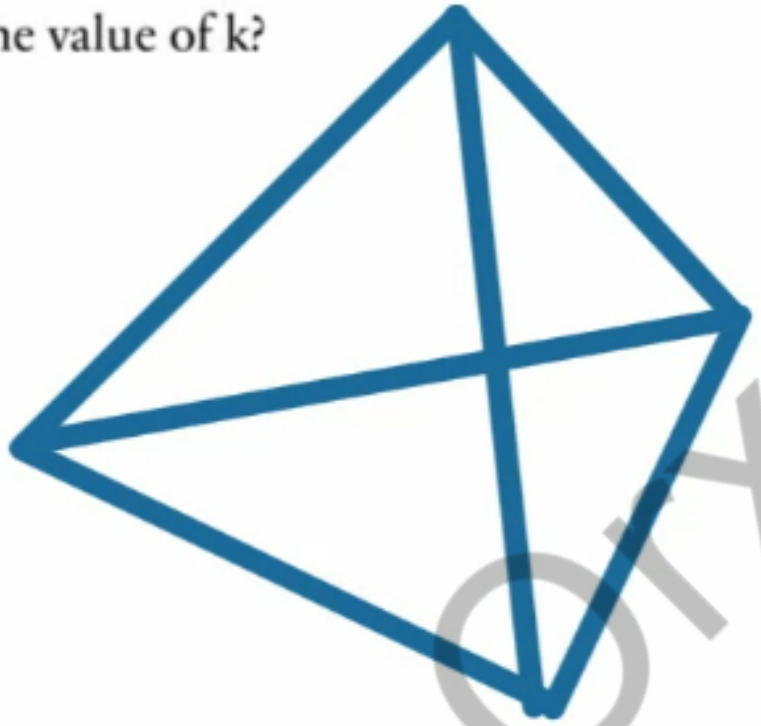
Two square base right pyramids A and B has same base area of 1600 cm^2. The height of pyramid A and B are 15 cm and 21 cm^2. What is the difference between surface area of pyramid B and pyramid A, in cm?

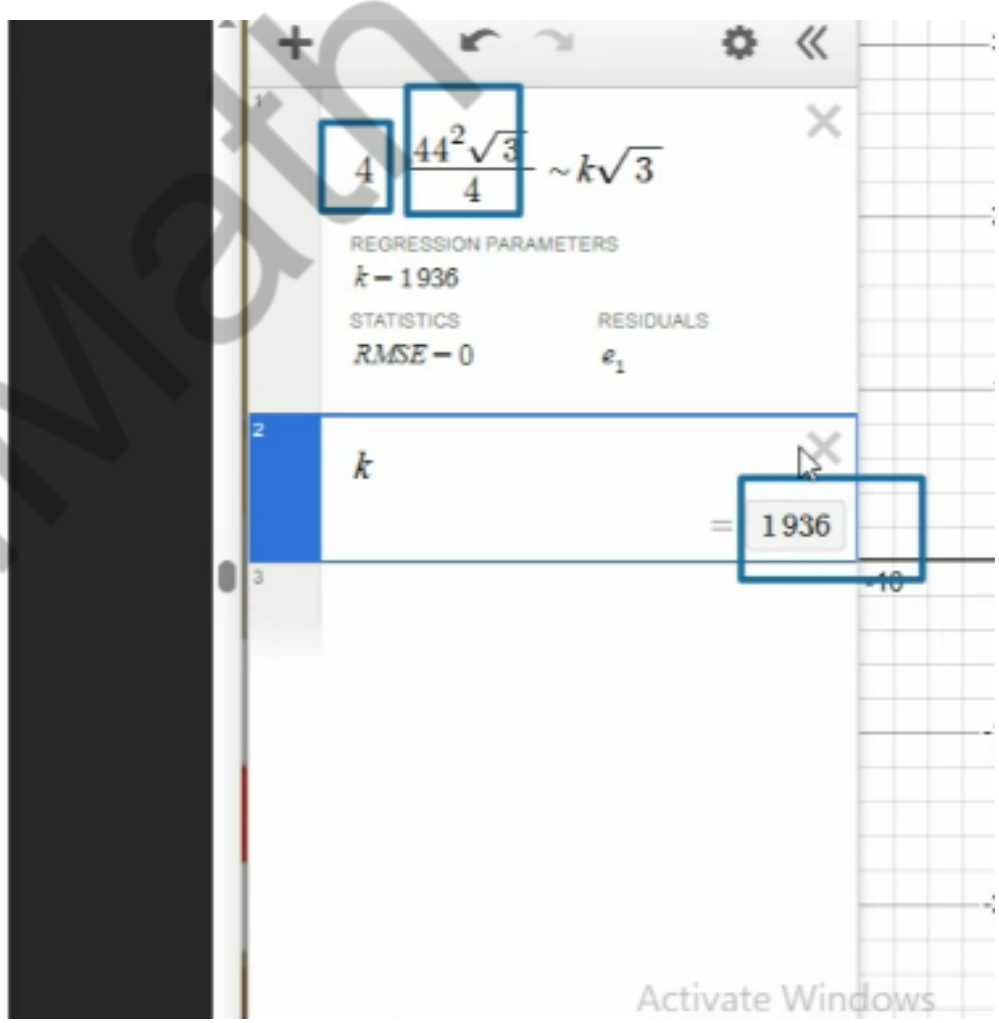
320



OxanMath
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A triangular pyramid has 6 equal legs and each of them is 44 cm. If the surface area of the pyramid is $k\sqrt{3}$ cm², what is the value of k?

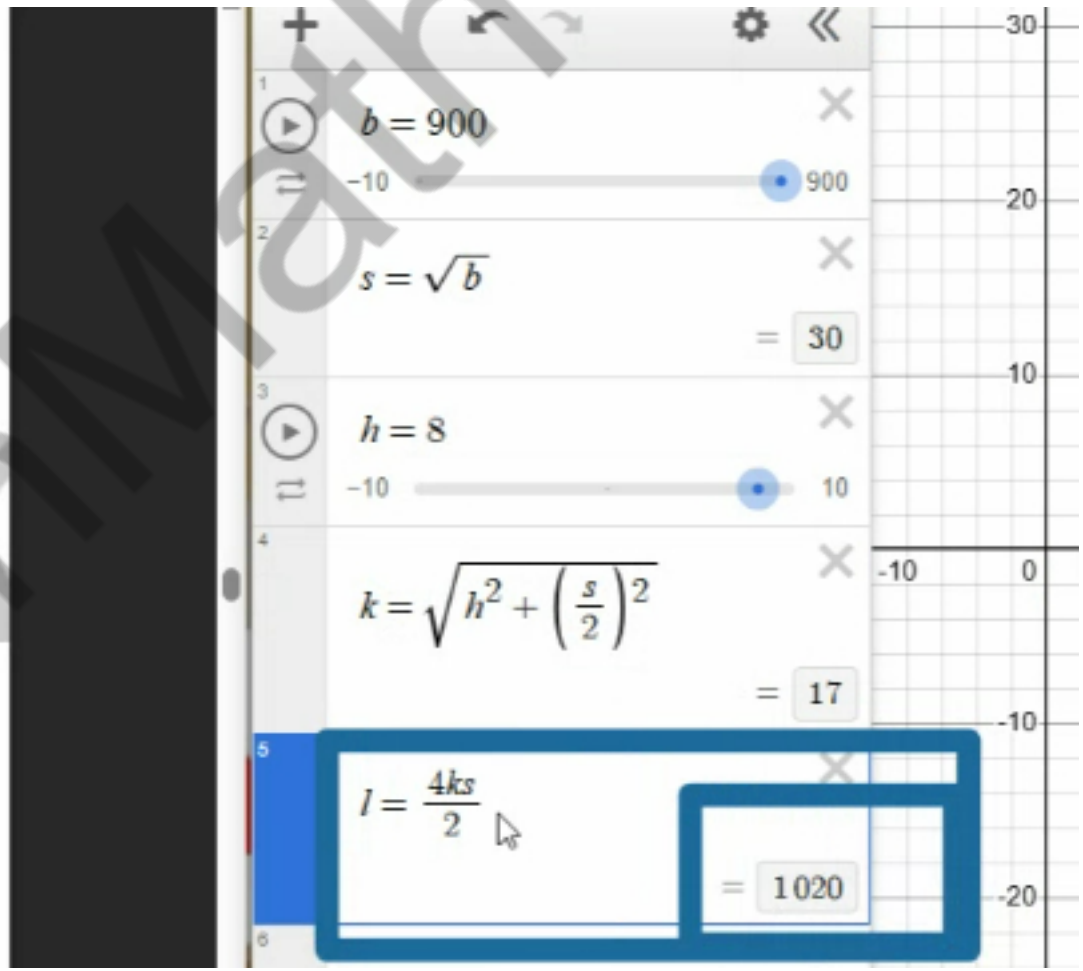




©rxanMath

The base area of a square base right pyramid is 900 cm^2. If the height of pyramid is 8 cm, what is lateral surface of the pyramid, in cm^2?

1020



Orxan Math

The lateral surface area and total surface area of the square base right pyramid area 16380 cm^2 and 32256 cm^2. What is the height of the pyramid, in cm?

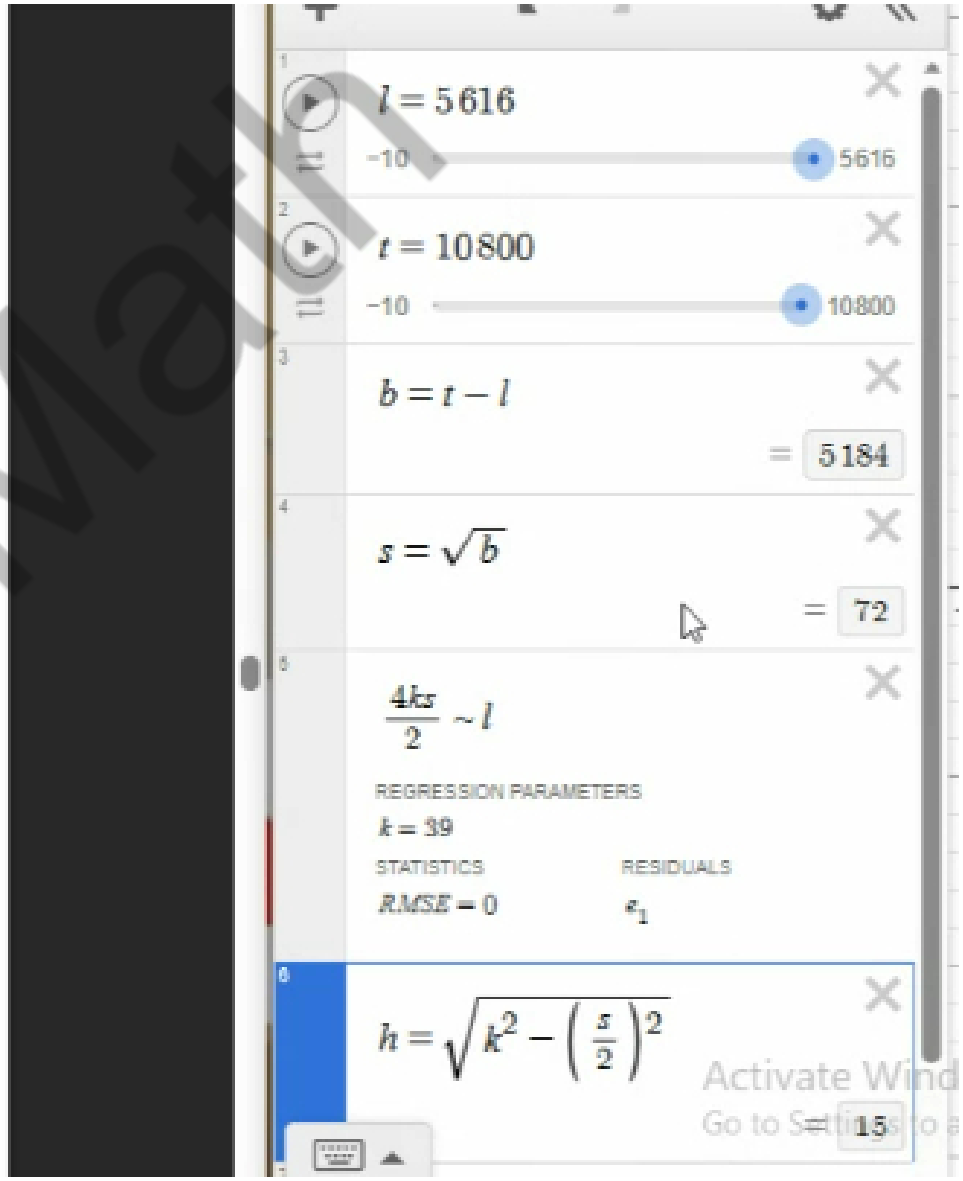
16



OrxanMath

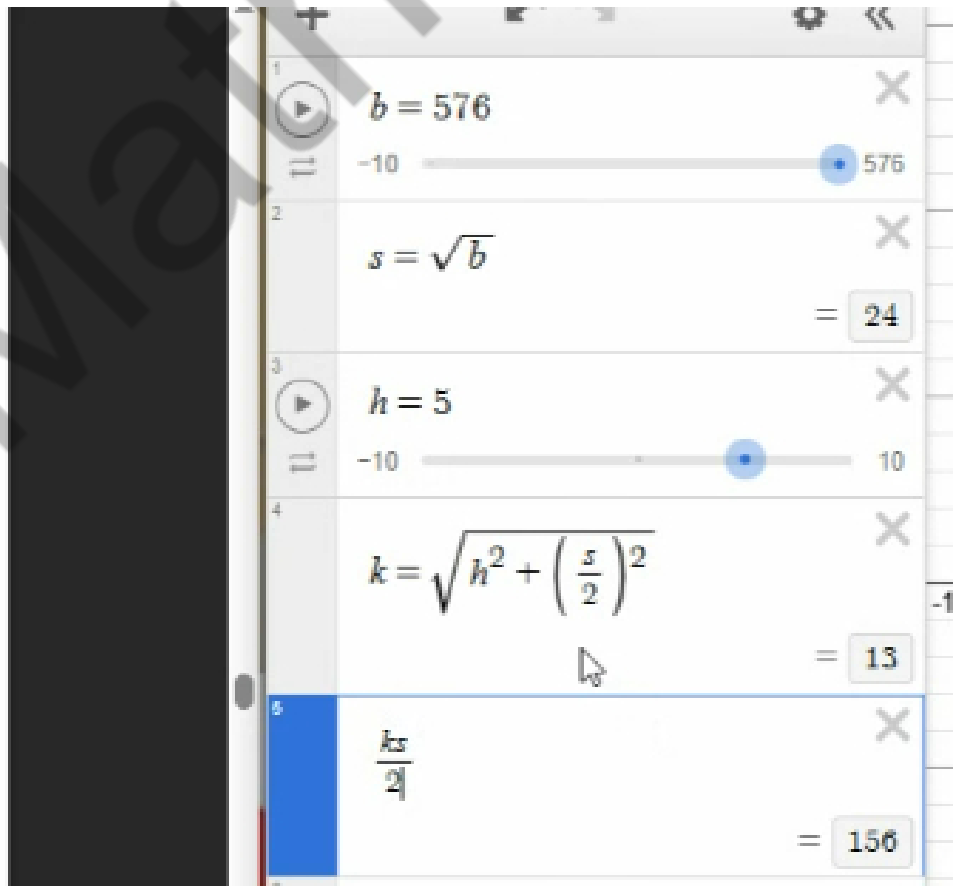
The lateral surface area and total surface area of the square base right pyramid area 5616 cm^2 and 10800 cm^2. What is the height of the pyramid, in cm?

15



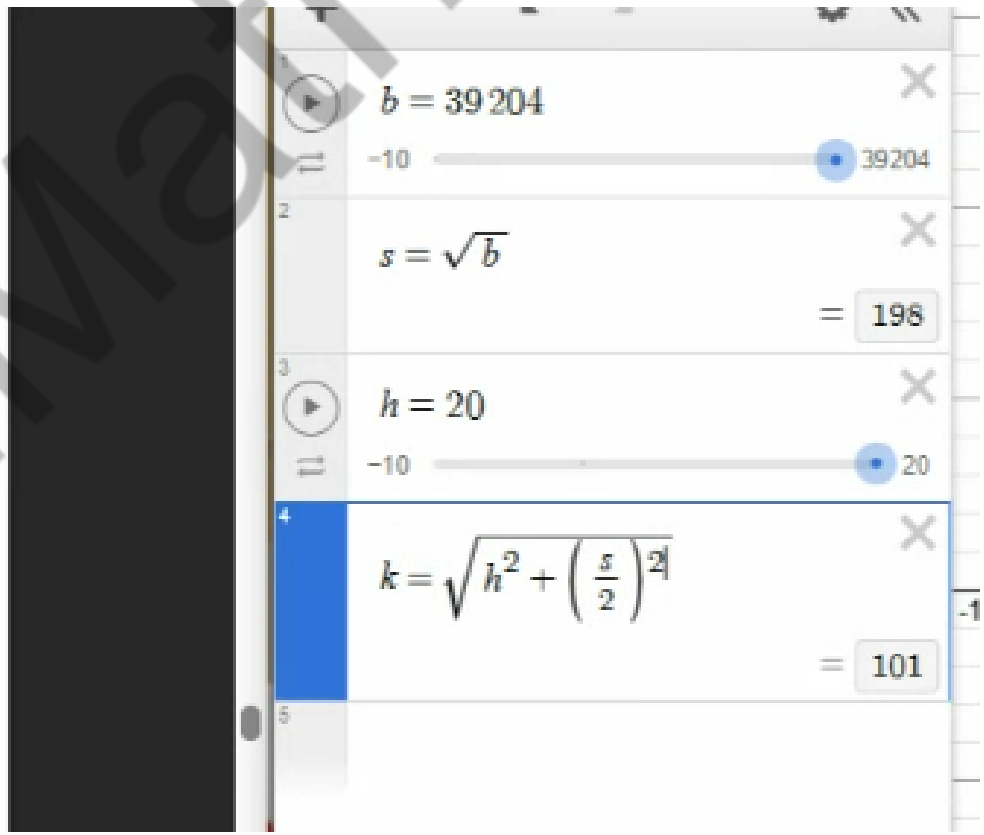
OrxanMath

The base area of a square base right pyramid is 576 cm^2. If the height of pyramid is 5 cm, what is area of one lateral face of the pyramid, in cm^2?



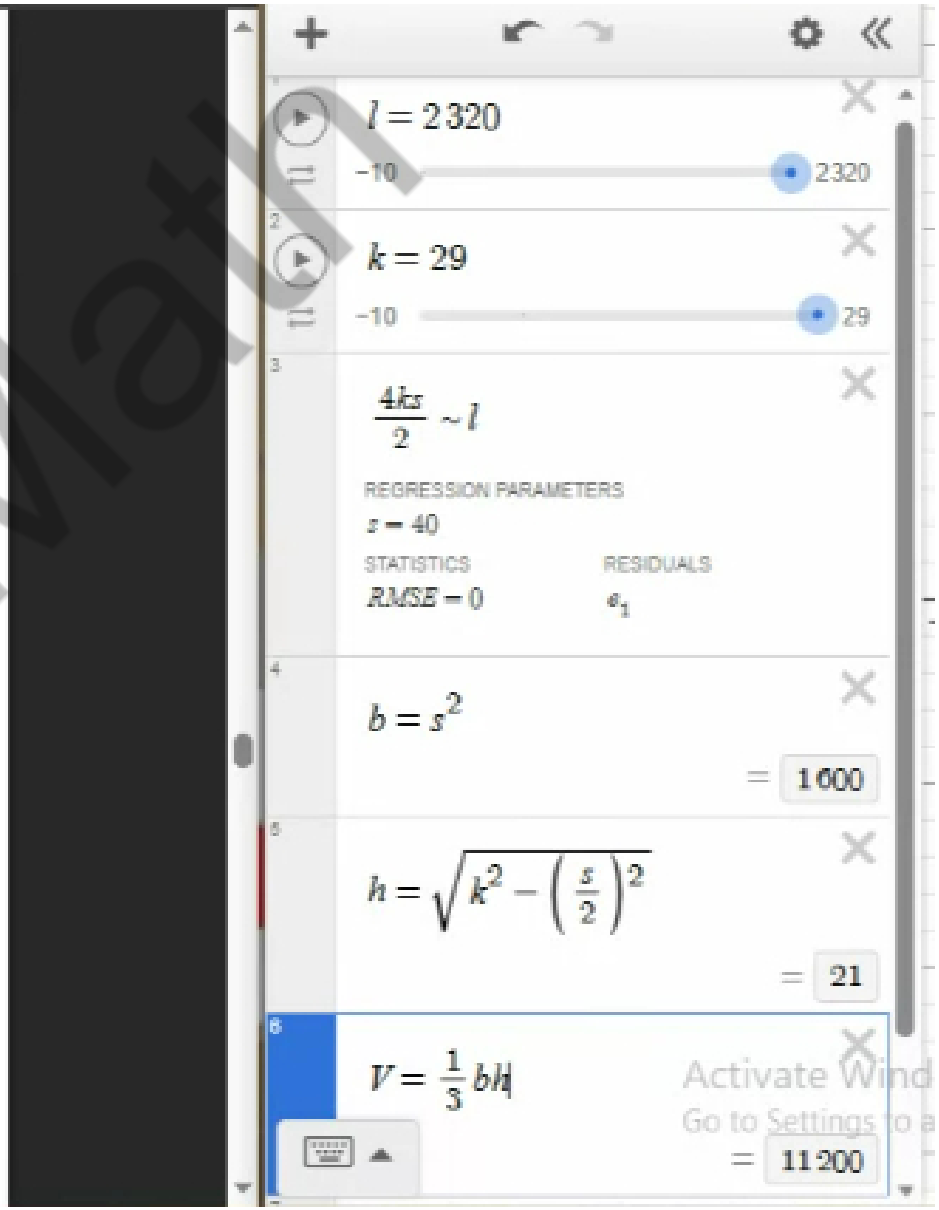
OrxanMath

The base area of a square base right pyramid is 39,204 cm^2. If the height of pyramid is 20 cm, what is the slant height of the pyramid, in cm?



OrxanMath

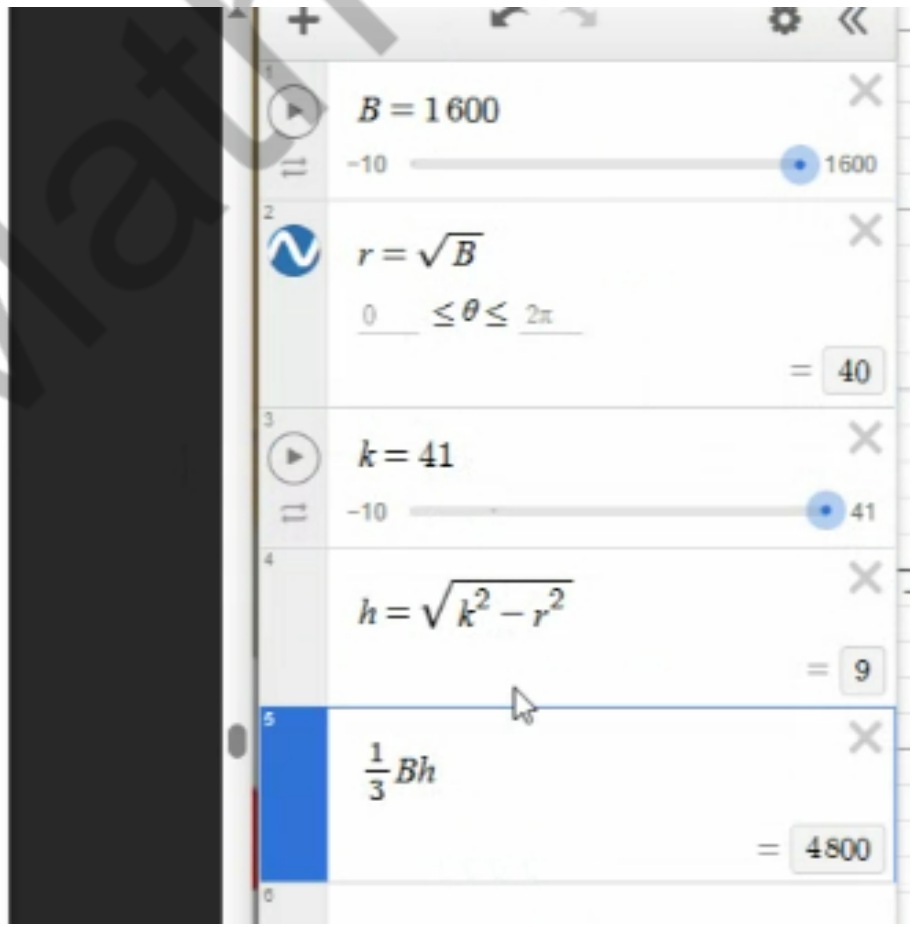
The lateral surface of a square base right pyramid is 2320 cm^2. If the slant height of pyramid is 29 cm, what is the volume of the pyramid, in cm^3?



OrxanMath

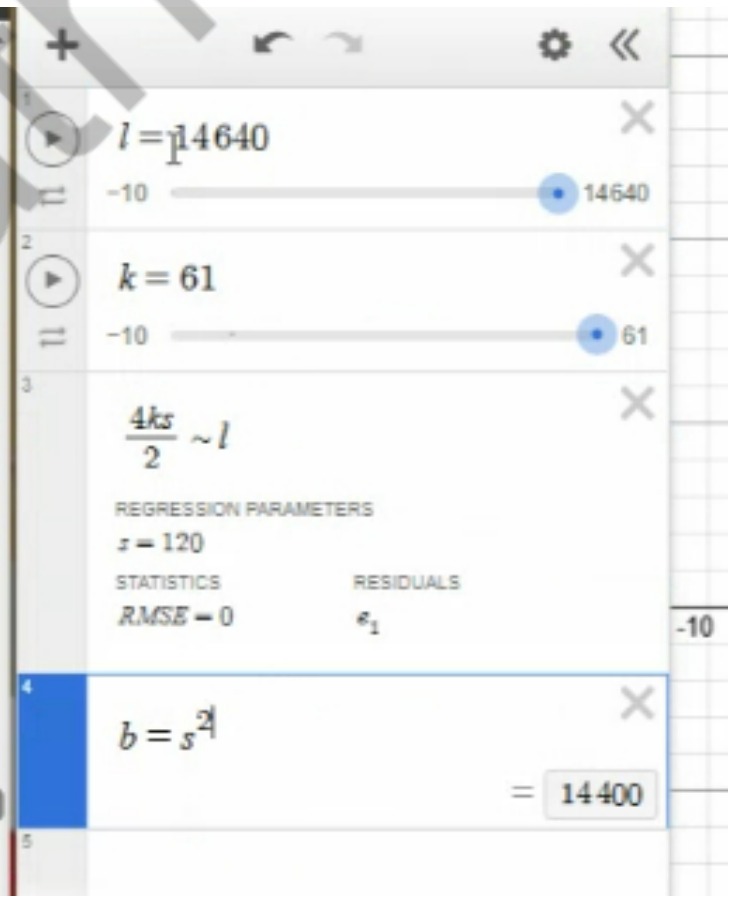
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The base area of right circular cone is 1600π cm^2. If the slant height of the cone is 41 cm, and the volume is $k\pi$ cm^3, what is the value of k?



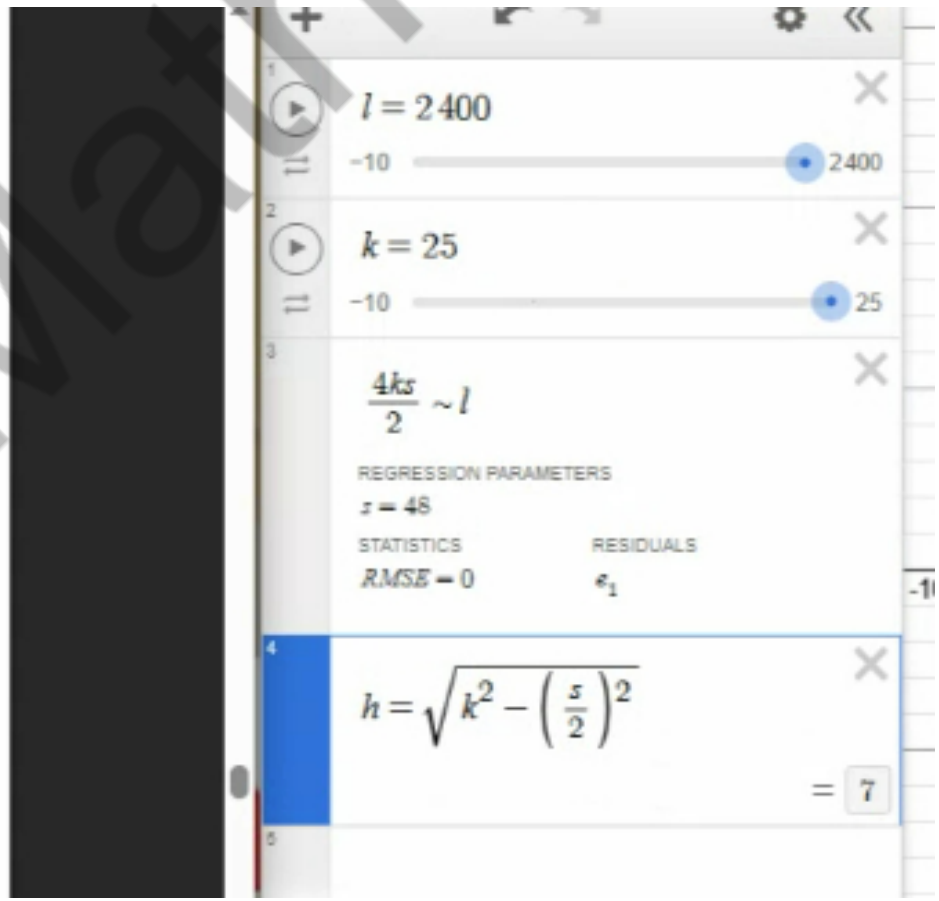
OrxanMath

The lateral surface of a square base right pyramid is 14,640 cm^2. If the slant height of pyramid is 61 cm, what is the base area of the pyramid, in cm^2?



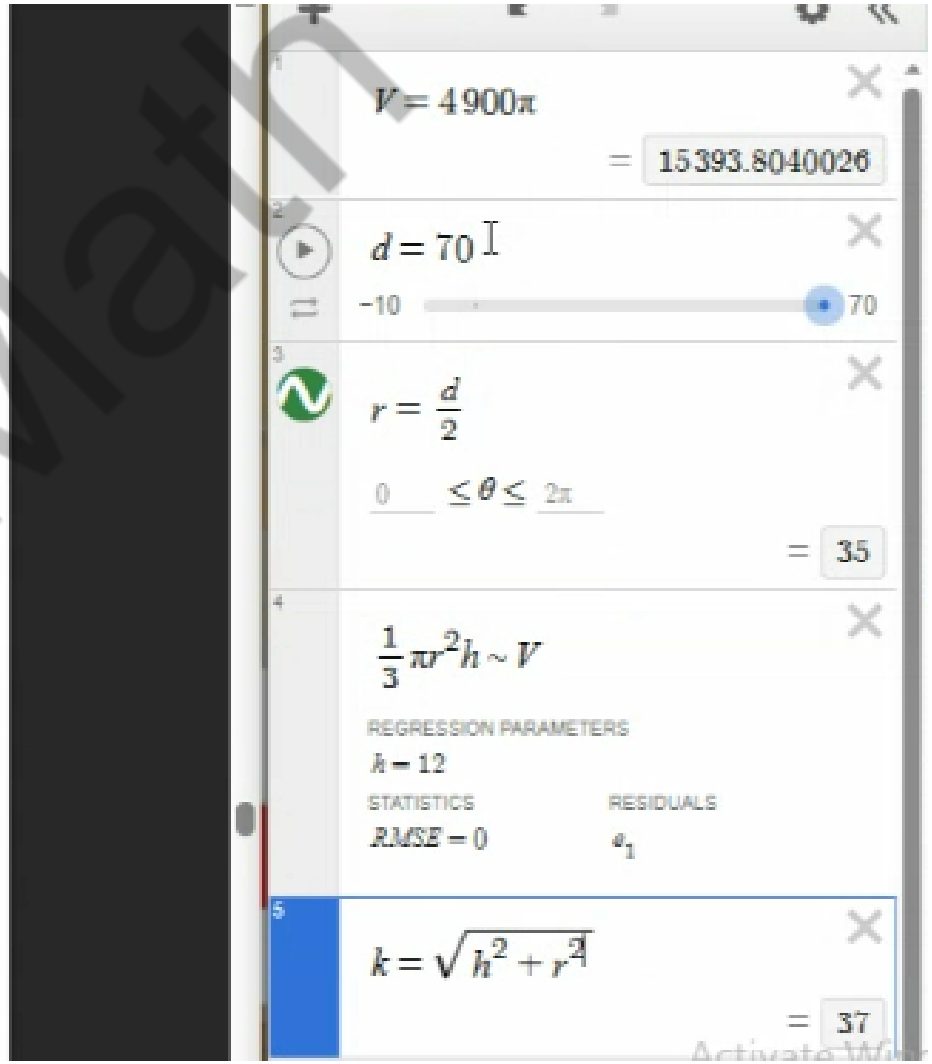
OrxanMath

The lateral surface of a square base right pyramid is 2400 cm^2. If the slant height of pyramid is 25 cm, what is the height of the pyramid, in cm?



OrxanMath

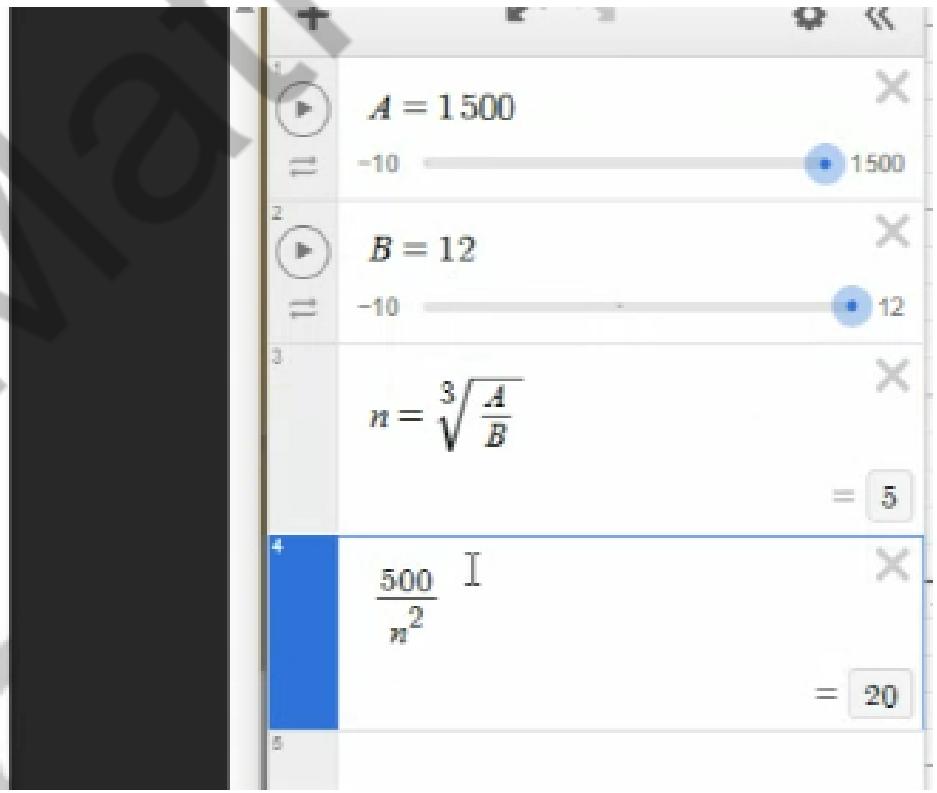
The volume of the right circular cone is 4900π cm^3. If internal diameter of the cone is 70 cm, what is the length of slant height of the cone, in cm?



OrxanMath

	Volume
Cylinder A	1500π cm^3
Cylinder B	12π cm^3

Cylinders A and B are similar. If the surface area of cylinder A is 500 cm^2, what is the surface of cylinder B, in cm^2?



OrxanMath

	Volume
Cylinder A	891π cm^3
Cylinder B	$\frac{891}{343}\pi$ cm^3

Cylinders A and B are similar. If the height of cylinder A is 11 cm, what is the internal radius of cylinder B, in cm?

9/7



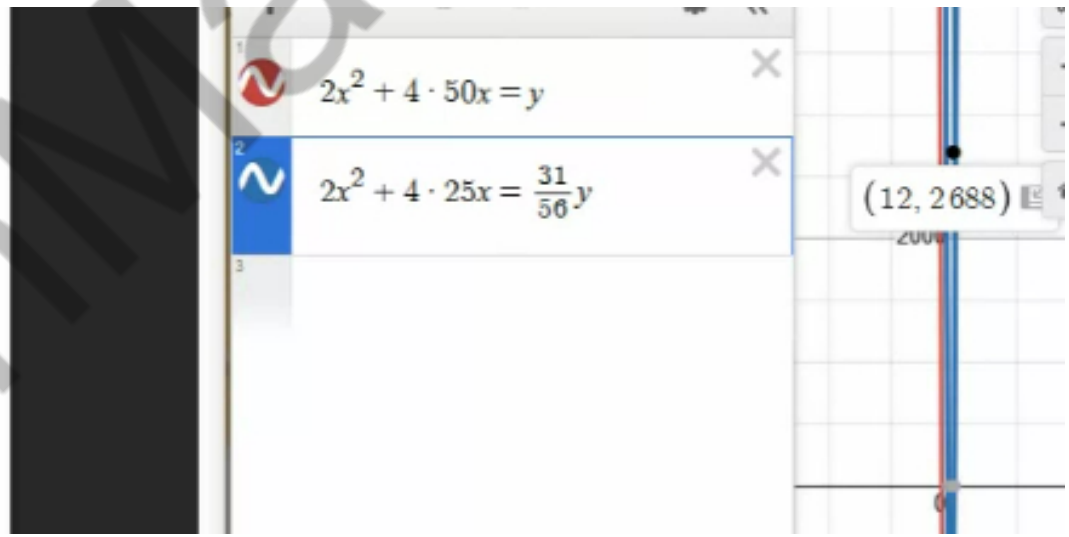
A rectangular prism has a height of 50 centimeters (cm). The base of the prism is a square and the surface area of the prism is S cm^2. If the prism is divided into two identical rectangular prisms by making a cut parallel to the square base, each resulting prism has a surface area of $\frac{31}{56}S$ cm^2. What is the side length, in cm, of each square base?

(A) 5

(B) 6

(C) 12

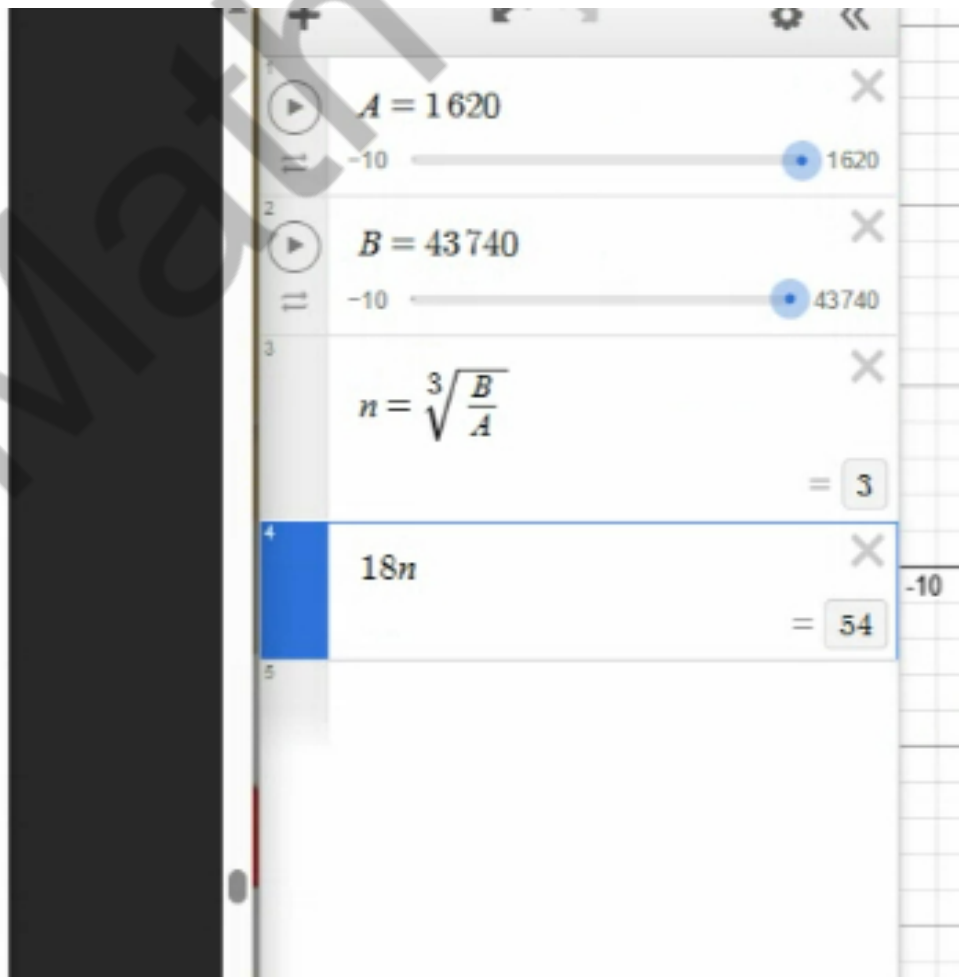
(D) 24



Orxan Math

	Volume
Cylinder A	1620π cm^3
Cylinder B	$43{,}740\pi$ cm^3

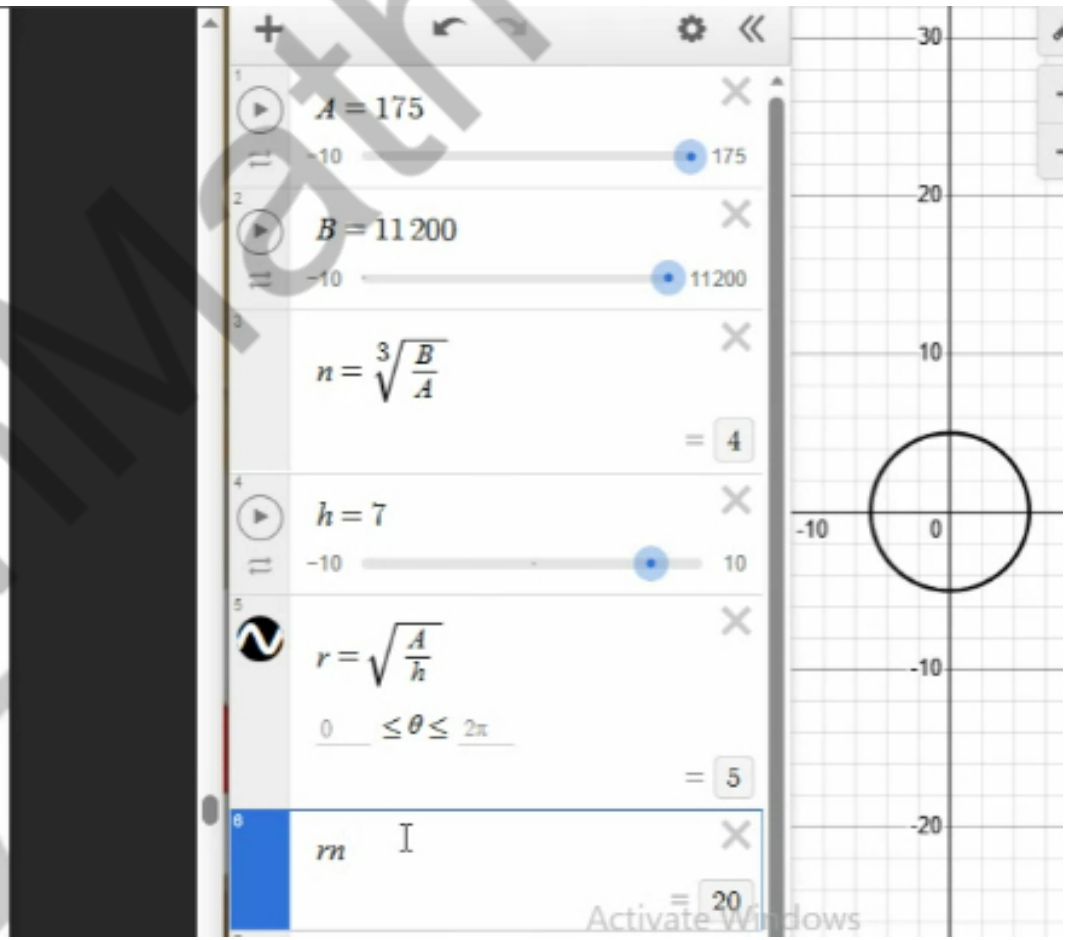
Cylinders A and B are similar. If the internal radius of cylinder A is 18 cm, what is the internal radius of cylinder B, in cm?



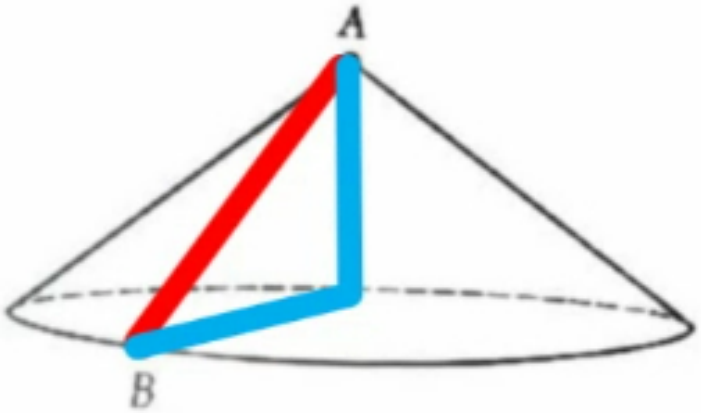
OrxanMath

	Volume
Cylinder A	175π cm^3
Cylinder B	11200π cm^3

Cylinders A and B are similar. If the height of cylinder A is 7 cm, what is the internal radius of cylinder B, in cm?

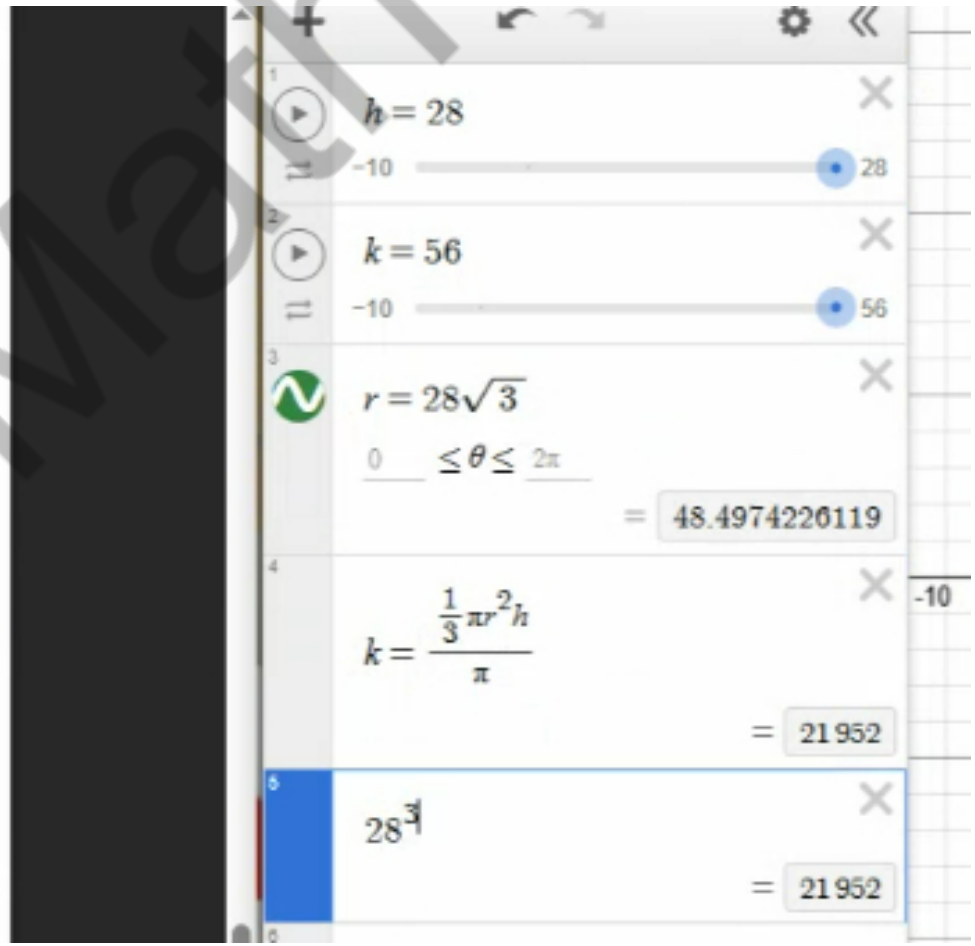


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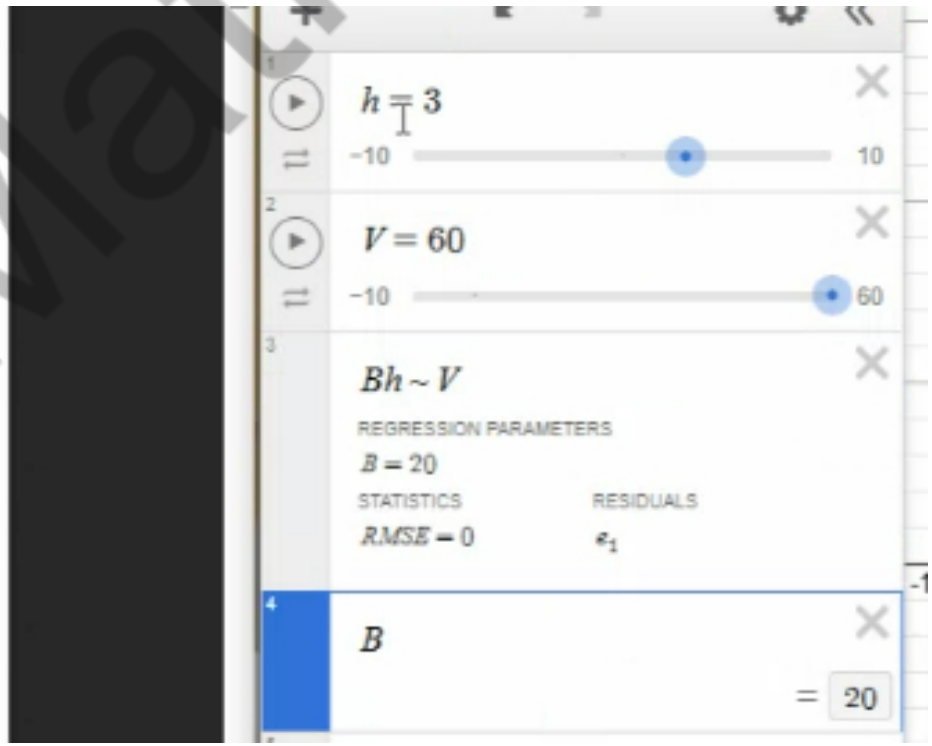
Note: Figure not drawn to scale.

For the right circular cone shown, B is a point on the circumference of the base, and the length of segment AB (not shown) is 56 centimeters. If the height of the cone is 28 centimeters and the volume of the cone is $k\pi$ cubic centimeters, what is the value of k ?



OryanMath

A triangular prism has a height of 3 centimeters (cm) and a volume of 60 cm^3. What is the area, in cm^2, of the base of the prism? (The volume of a triangular prism is equal to Bh, where B is the area of the base and h is the height of the prism.)



OrxanMath

A right circular cone has a volume of $75,600\pi$ cubic centimeters and the area of its base is $3,600\pi$ square centimeters. What is the slant height, in centimeters, of this cone?

(A) 21

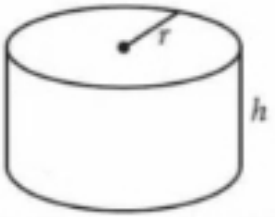
(B) 60

(C) 63

(D) 87



OrxanMath



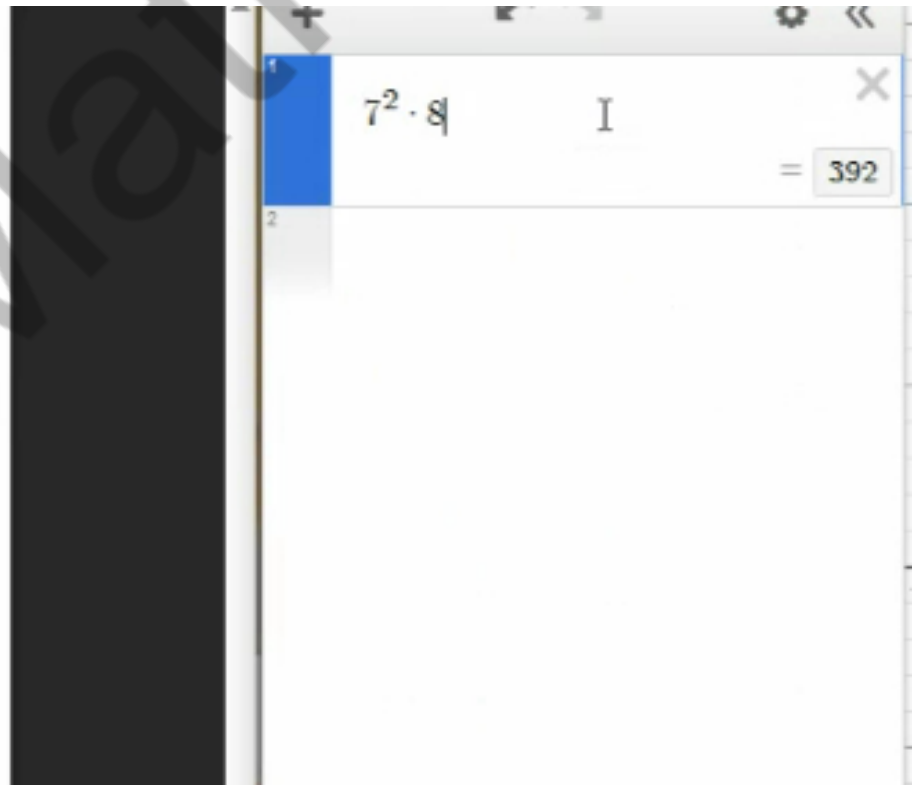
The figure shown is a right circular cylinder with a radius of r and height of h. A second right circular cylinder (not shown) has a volume that is 392 times as large as the volume of the cylinder shown. Which of the following could represent the radius R, in terms of r, and the height H, in terms of h, of the second cylinder?

A. $R = 8r$ and $H = 7h$

B. $R = 8r$ and $H = 49h$

C. $R = 7r$ and $H = 8h$

D. $R = 49r$ and $H = 8h$



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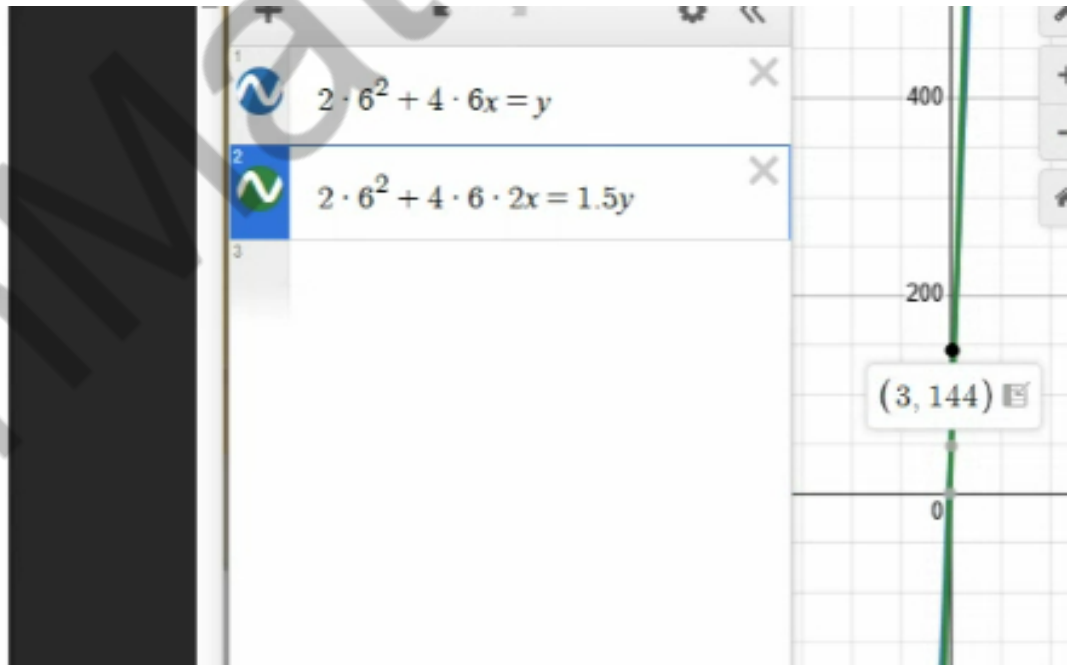
Two identical rectangular prisms each have a base side length of 6 centimeters (cm). The base of each prism is a square, and the surface area of each prism is K cm^2. If the prisms are glued together along a square base, the resulting prism has a surface area of 1.5K cm^2. What is the height, in cm, of each prism?

A) 1.5

B) 1.2

C) 3

D) 4



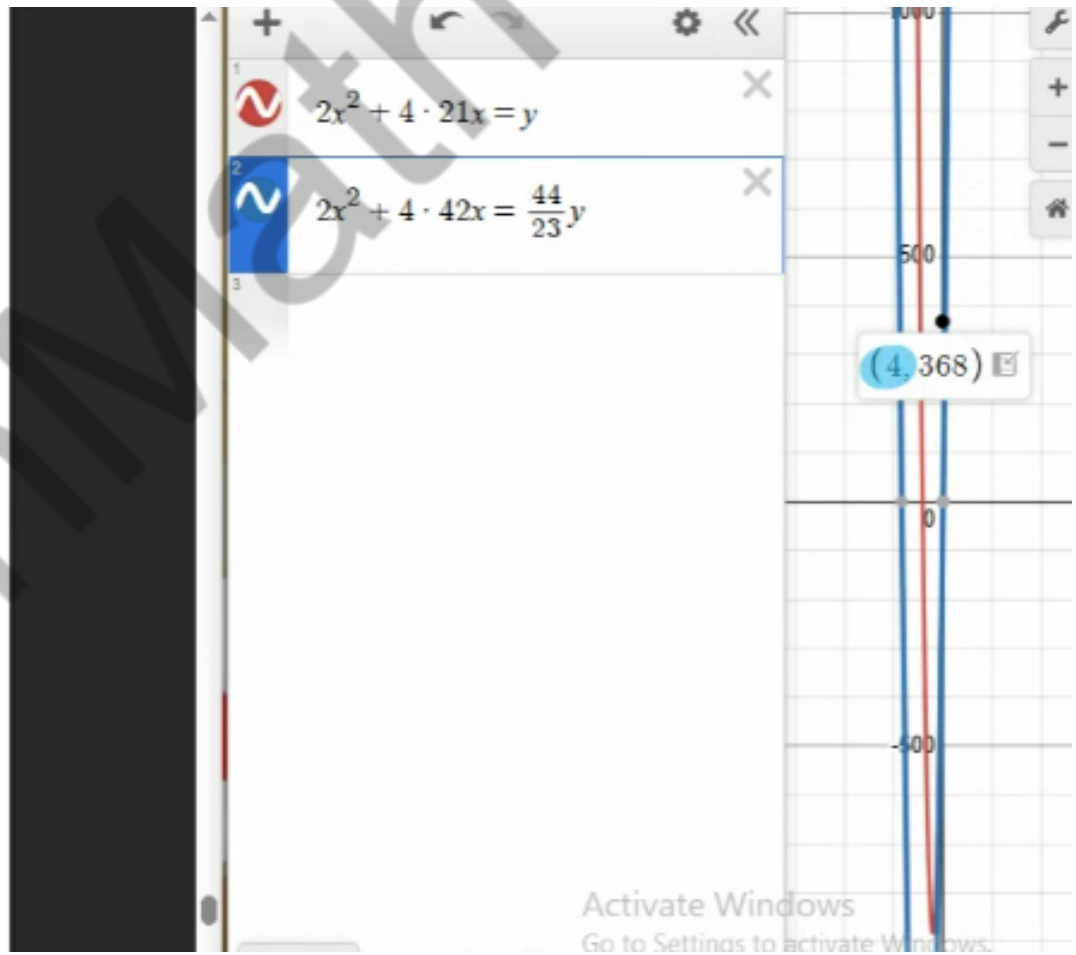
Orxan Math

Two identical rectangular prisms each have a height of 21 centimeters (cm). The base of each prism is a square, and the surface area of each prism is K cm^2. If the prisms are glued together along a square base, the resulting prism has a surface area of $\frac{44}{23}K$ cm^2. What is the side length, in cm, of each square base?

A) 4

B) 8

C) 9



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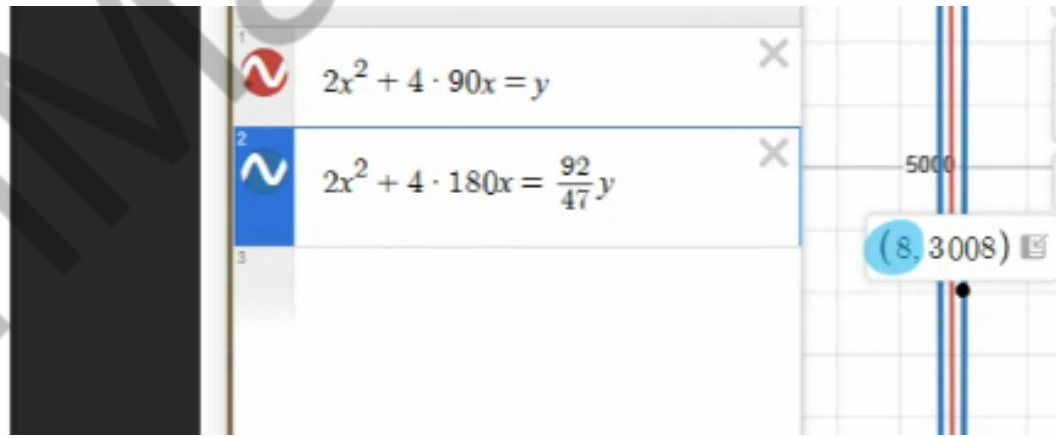
Two identical rectangular prisms each have a height of **90 centimeters (cm)**. The base of each prism is a square, and the surface area of each prism is K **cm²**. If the prisms are glued together along a square base, the resulting prism has a surface area of $\frac{92}{47}K$ **cm²**. What is the side length, in **cm**, of each square base?

A. **4**

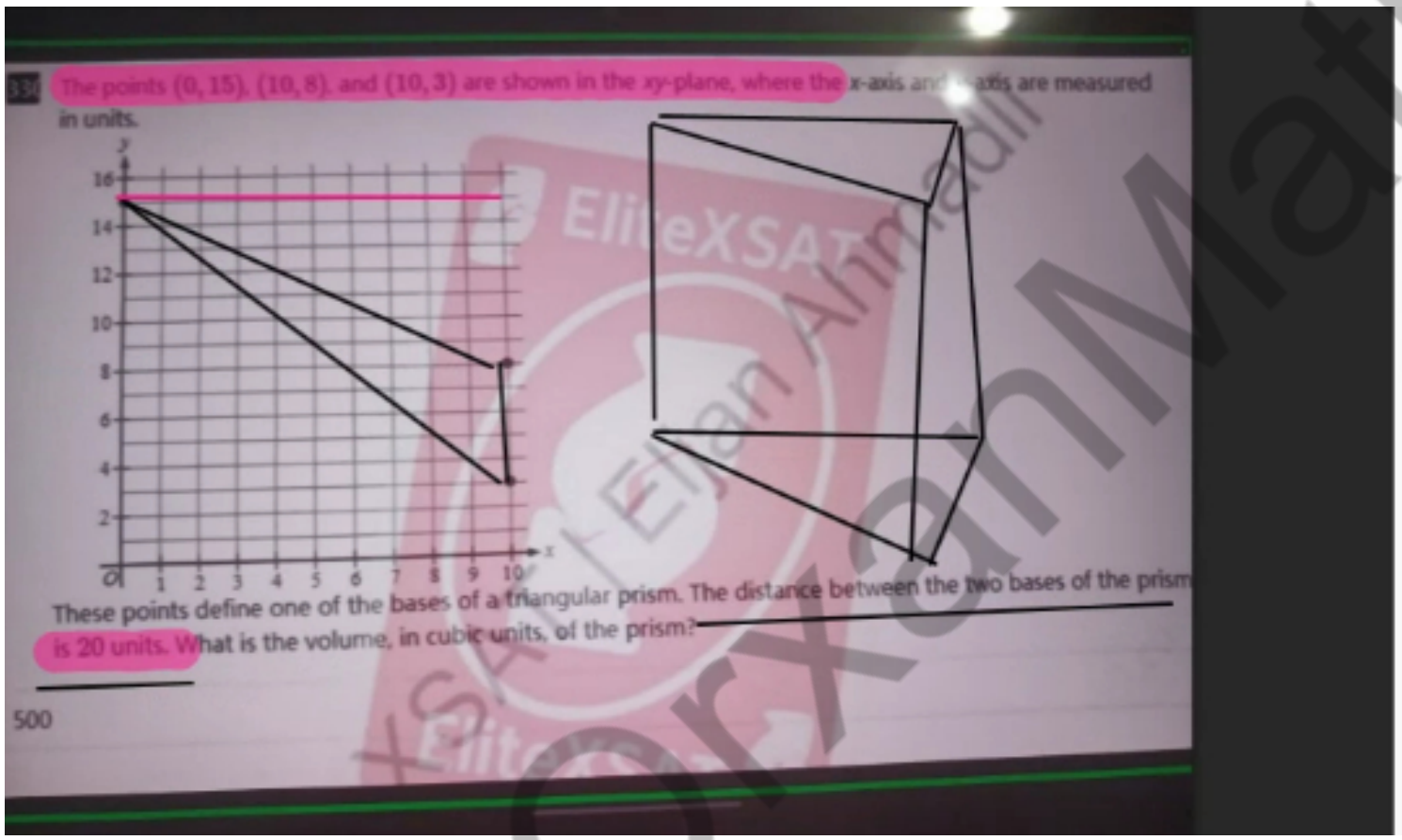
B. **8**

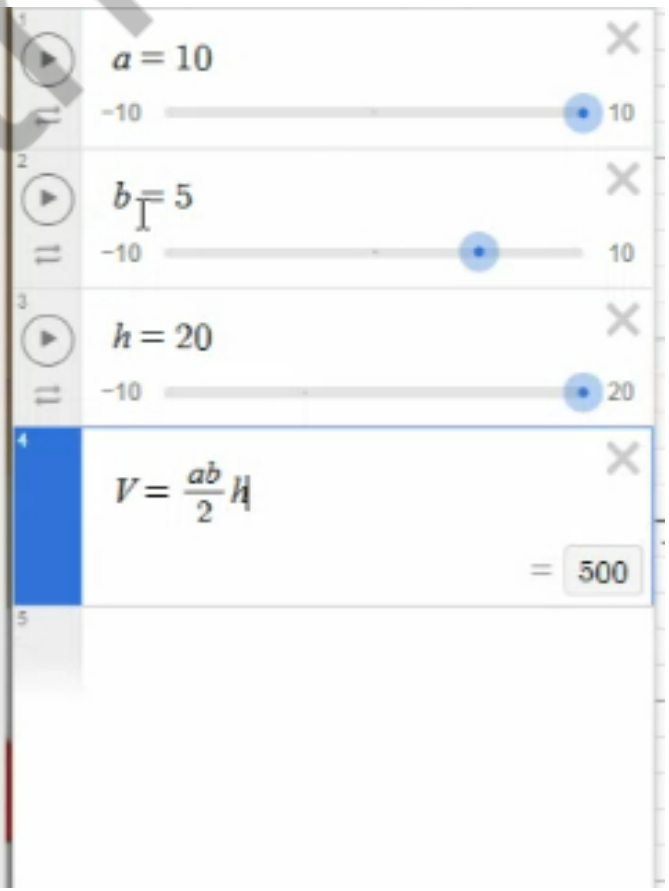
C. **9**

D. **16**



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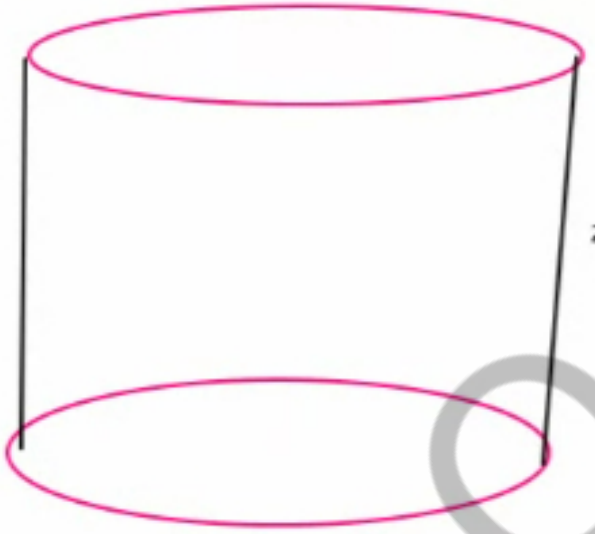


EliteXSAT
XSAT Elan Ahmadli
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August SAT 2025 question pro version

The points $(0, 15)$, $(10, 8)$, and $(10, 3)$ lie on the circumference of one circular base of a cylinder. The distance between the two bases of the cylinder is 20 units. If the volume of the cylinder is $m\pi$ cubic units and the surface area of the cylinder is $n\pi$ square units, what is the value of $m - n$?

By Mr.Yokubjon



x_1	y_1
0	15
10	8
10	3

$(x_1 - a)^2 + (y_1 - b)^2 \sim R^2$

REGRESSION PARAMETERS

$a = 0.8$ $b = 5.5$ $R = 9.53362$

STATISTICS RESIDUALS

$RMSE = 8.2 \times 10^{-15}$ a_1

$h = 20$

-10 20

$m = R^2 h$

$= 1817.8$

$n = 2R^2 + 2Rh$

$= 563.124988167$

round$(m - n)$

$= 1255$

OrxaniMath

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