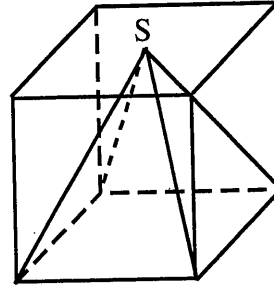


## REVIEW-Surface Area & Volume

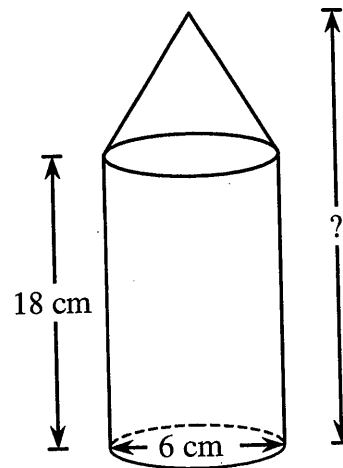
The figure to the right shows a pyramid within a cube.

The total surface area of the cube is  $600 \text{ cm}^2$ . Vertex S of the pyramid is at the centre of the top face of the cube.

**Find the total surface area of the pyramid after it is removed from the cube.**

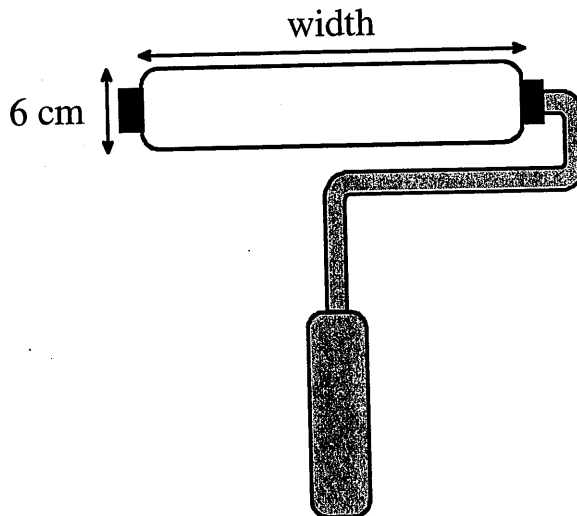


The pencil container shown on the right has a volume of  $565 \text{ cm}^3$ . The diameter of the base is  $6 \text{ cm}$ . The length of the cylindrical part is  $18 \text{ cm}$ .



**To the nearest centimetre, what is the full length the container?**

A painter uses a roller with a diameter of  $6 \text{ cm}$ . Each revolution covers an area of  $471 \text{ cm}^2$ . **What is the width of the roller to the nearest cm?**

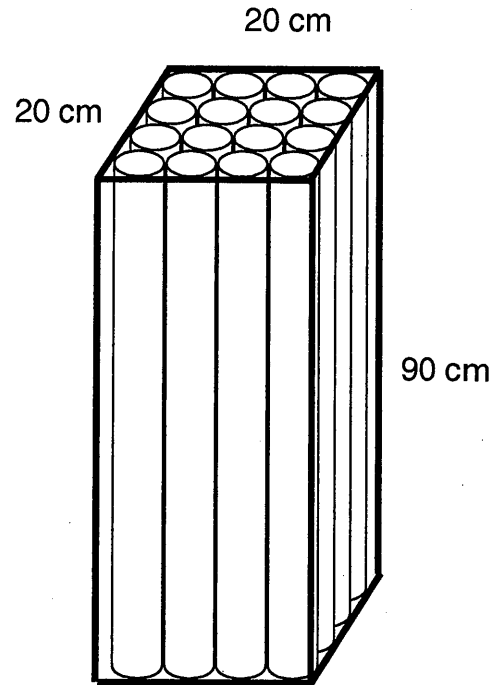


## REVIEW-Surface Area & Volume

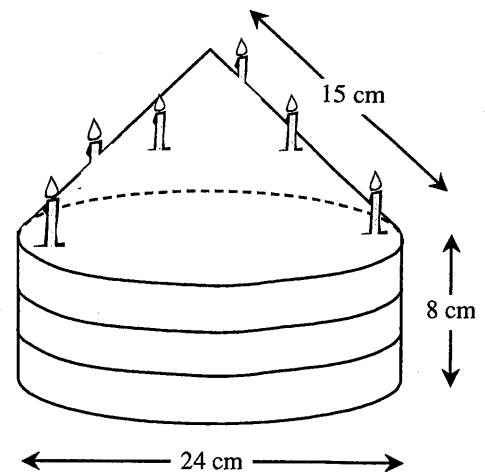
Sixteen cylindrical neon tubes, each 90 cm long, are tightly packed in a box in the shape of a square prism.

To protect the tubes, foam is injected into the empty space in the box.

**What volume of foam is required to completely fill the empty space?**

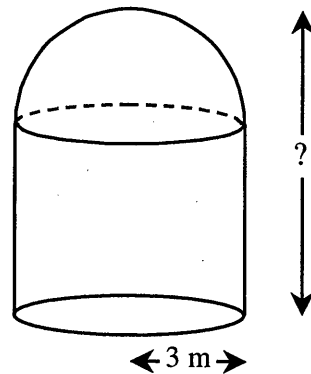


Edward loves astronomy. For his birthday, Edward's mother made him a cake in the shape of a rocket (a cylinder with a cone on top). **What is the total volume of Edward's birthday cake?**



The total surface area of the probe is  $179\text{m}^2$  and the radius of its base measures 3m.

**What is the total height of *Space Probe Mars 3*?**

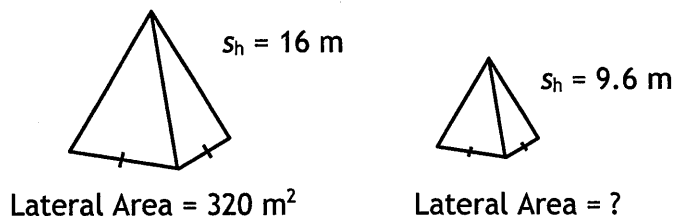


**Review: Geometric Probability, Isometrics, Statistics,  
Inequalities, Scientific Notation**

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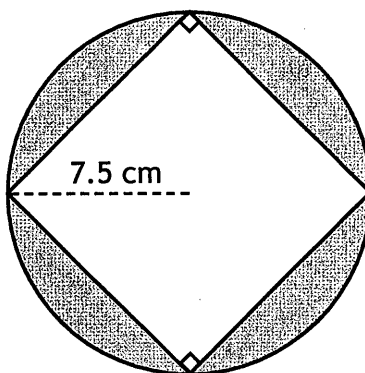
Represents the solution set of the inequality below with an interval notation and on a number line?  $-2x + 5 \leq 11$

Two square based pyramids are similar. The lateral area of the larger pyramid is  $320\text{m}^2$ . The slant height of the larger pyramid is  $16\text{ m}$ . The slant height of the smaller pyramid is  $9.6\text{ m}$ .



**What is the lateral area of the smaller pyramid?**

On the target below, the square is inside the circle. The radius of the circle is  $7.5\text{ cm}$ .



**What is the probability, to the nearest percentage, that the dart lands in the shaded area?**

**What is the answer to the following in correct scientific notation?**

$$(0.95 \times 10^{-5}) \cdot (25.6 \times 10^3)$$

- |                            |                           |
|----------------------------|---------------------------|
| A) $2.432 \times 10^{-3}$  | C) $2.432 \times 10^{-1}$ |
| B) $2.432 \times 10^{-14}$ | D) $24.32 \times 10^{-2}$ |

**Review: Geometric Probability, Isometrics, Statistics,  
Inequalities, Scientific Notation**

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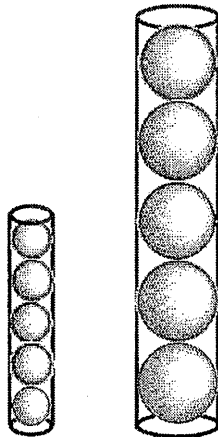
In Brenda's Science class, the calculations of her term mark are shown in the table below. However, her Test 1 mark is missing.

Term Content (Weighting)	Brenda's Marks
Project (40%)	70
Test 1 (15%)	?
Test 2 (25%)	73
Quiz 1 (5%)	40
Quiz 2 (5%)	80
Assignment (10%)	90
TERM MARK	71

**What is Brenda's mark for Test 1?**

A company makes 2 sizes of spherical ornaments: large and small.  
The ornaments are sold in similar cylindrical containers.

- The area of 1 small ornament is  $78.5 \text{ cm}^2$ .
- The volume of the small cylinder is  $490.625 \text{ cm}^3$ .
- The volume of the large cylinder is  $3925 \text{ cm}^3$ .



$V = 490.625 \text{ cm}^3$        $V = 3925 \text{ cm}^3$

**What is the radius of the large cylinder?**

**Review: Geometric Probability, Isometrics, Statistics,  
Inequalities, Scientific Notation**

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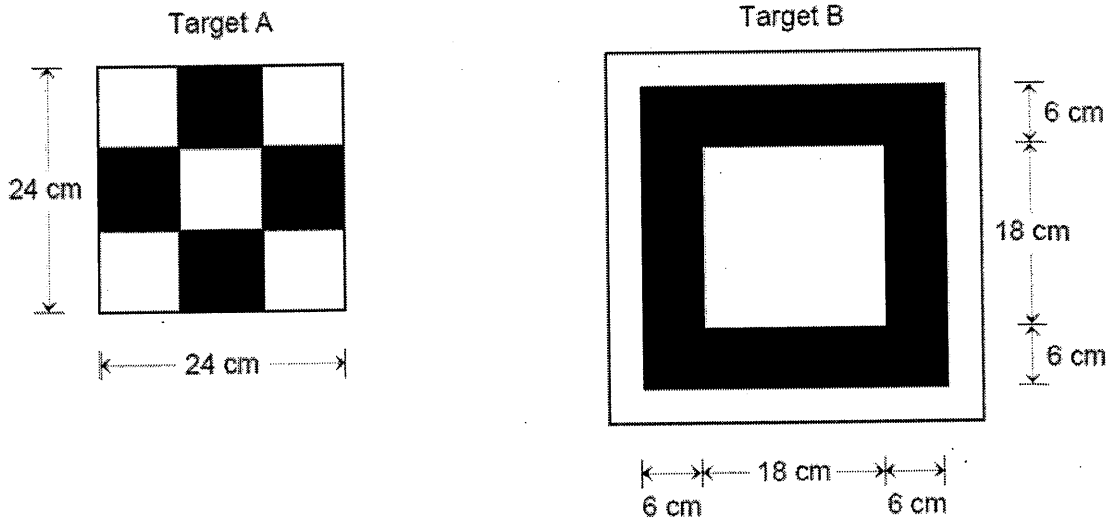
**TWO TARGETS**

A game of darts has two square targets.

Target A is divided into 9 congruent squares, 4 of which are black. The other squares are white. Each side of target A is 24 cm long.

The centre of target B is a white square with each side measuring 18 cm. This white square is surrounded by a black band that is 6 cm wide. The rest of the target is white.

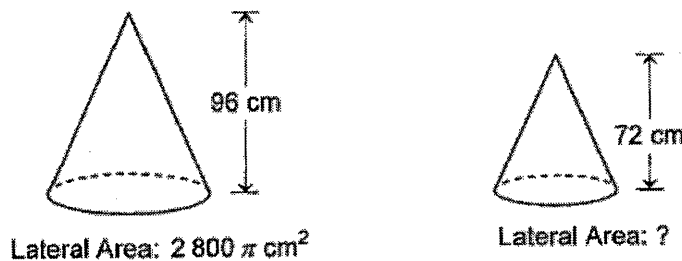
The two targets are shown below.



If a dart is thrown at random, the probability that it will hit a black area is the same for both targets.

How long is each side of target B?

9. Two right circular cones are similar. The lateral area of the bigger cone is  $2800\pi \text{ cm}^2$ . The height of the bigger cone is 96 cm. The height of the smaller cone is 72 cm.



What is the lateral area of the smaller cone to the nearest  $\text{cm}^2$ ?