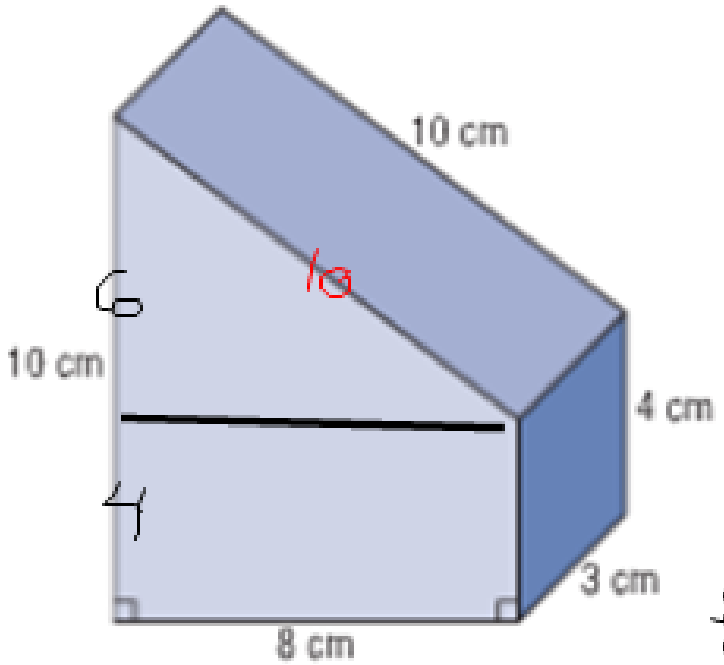
Determine the surface area of this object.



Bottom Box

Top = 8 x 3 = 24

Bottom = 24

Left = 12

Right = 4 x 3 = 12

Front = 8 x 4 = 32

Back = 32

$$24 + 24 + 12 + 12 + 32 + 32 = 136\ cm^2$$

Triangle Box

Front = $\frac{8 \times 6}{2} = 24$

Back = 24

Left = 6 x 3 = 18

Right = 10 x 3 = 30

Bottom = 8 x 3 = 24

Top doesn't exist

$$24 + 24 + 18 + 30 + 24 = 120\ cm^2$$

Overlap

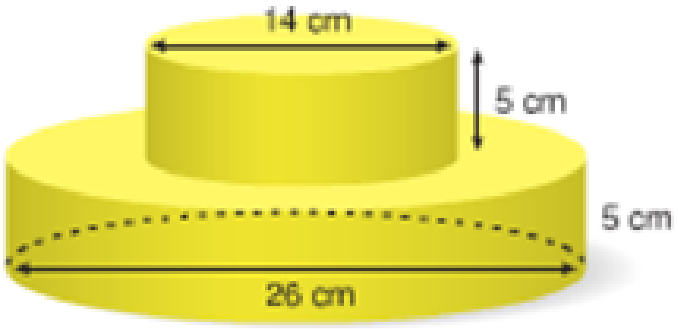
bottom of triangular box = 24

top of rectangular box = 24

Final Answer

$136 + 120 - 24 - 24 = 208\ cm^2$

Two round cakes have diameters of 14 cm and 26 cm, and are 5 cm tall.
They are arranged as shown. The cakes are covered in frosting. What is the area of frosting?



Circumference = $2\pi r$

Radius small cake = 7cm

Circumference small cake = $2 \times \pi \times 7$

$= 43.9823$

Sides of small cake = 43.9823×5

$= 219.9115$

Top small cake = $\pi(7^2) = 153.938$

Big cake

$C = 2 \times \pi \times 13$

$= 81.6814$

Sides = $81.6814 \times 5 = 408.407$

Top = $\pi r^2 = \pi(13)^2 = 530.9292$

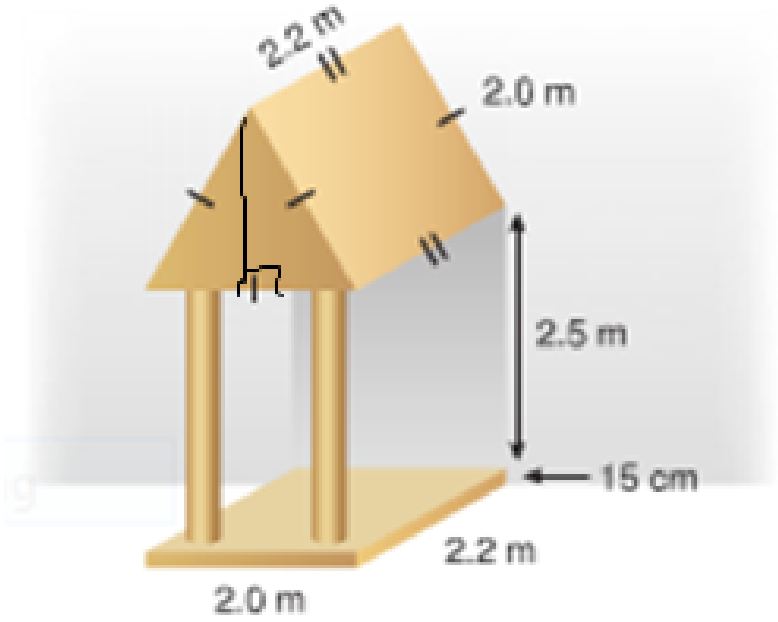
Subtract bottom of small cake = 153.938

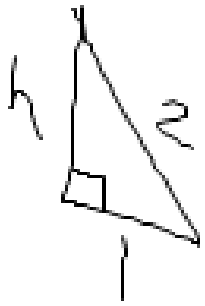
FINAL ANSWER

$219.9115 + 408.407 + 530.9292$

$= 1159.25 cm^2$

The roof, columns, and base of this porch are to be painted.
The radius of each column is 20 cm.
What is the area to be painted, to the nearest square metre?





use pythagorean theorem to find height of triangle

Practice P. 40-43

Numbers: 3de, 4b, 5

Numbers: 7

Numbers: 8, 11, 12, 14