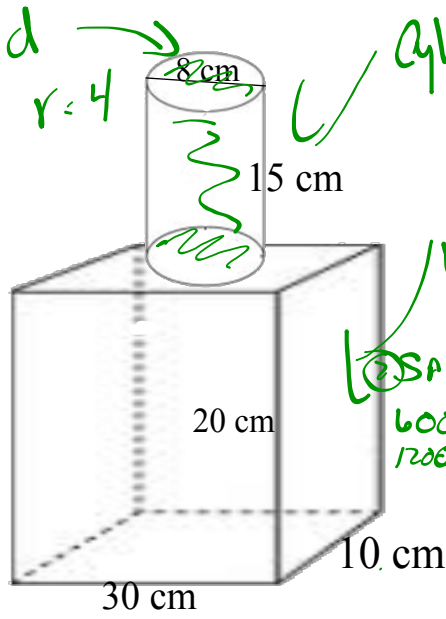


How much paint is needed to cover the following shape?



You try!!!

Overlap

Rectangular Prism

② SA of rectangle =
 $600\text{cm}^2 + 400\text{cm}^2 + 1200\text{cm}^2 = 2200\text{cm}^2$

Rectangular Prism

① Top + Bottom
 $(30\text{cm} \times 10\text{cm}) \times 2 = (300\text{cm}^2) \times 2 = 600\text{cm}^2$

Sides
 $(60\text{cm} \times 20\text{cm}) \times 2 = (1200\text{cm}^2) \times 2 = 2400\text{cm}^2$

Front + Back
 $(30\text{cm} \times 20\text{cm}) \times 2 = (600\text{cm}^2) \times 2 = 1200\text{cm}^2$

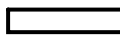
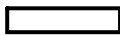
Cylinder

$2\pi r^2 + 2\pi rh$
 $2\pi(4)^2 + 2\pi(4)(15)$
 $2\pi(16) + 2\pi(60)$
 $100.48 + 376.8$
 $= 477.28$

Total Surface Area

Area of rectangular prism + Area of cylinder
 $2200\text{cm}^2 + 477.28 - 100.48 = 2576.8\text{cm}^2$

Rectangular Prism



Total Surface Area =

Find the surface area...

$c^2 = a^2 + b^2$
 $4^2 = a^2 + 3^2$
 $16 = a^2 + 9$
 $16 - 9 = a^2$
 $7 = a^2$
 $\sqrt{7} = a = 3.5$

surface area of Triangle:
 Height: 3.5
 Base: 4

Area of Triangle
 $\frac{b \times h}{2} = \frac{4 \times 3.5}{2}$
 $= \frac{14}{2}$
 $= 7$

Area of Both Triangles = $7 \times 2 = 14$

Is there overlap? where?
 Overlapped surface area = (Top of cylinder, circle)

Surface area of Rectangles =

$$(6.2m \times 4m) \times 3 = (24.8m^2) \times 3 = 74.4m^2$$

Total Surface Area of Triangular Prism =

$$74.4m^2 + 14m^2 = 88.4m^2$$

$r = 2$ $h = 5$

Cylinder

$$2\pi r^2 + 2\pi r h$$

$$2\pi(2)^2 + 2\pi(2)(5)$$

$$2\pi(4) + 2\pi(10)$$

$$10.28 + 62.8$$

Surface area of Cylinder = $73.08m^2$

Total Surface Area = Triangular Prism + Cylinder - OVERLAP

$$= 88.4m^2 + 73.08m^2 - (2\pi r^2)$$

$$= 88.4m^2 + 73.08m^2 - (2\pi(2)^2)$$

$$= 88.4m^2 + 73.08m^2 - 25.12$$

$$= 136.36m^2$$

- ① Find Surface Area of one object.
- ② Find Surface Area of Second object.
- ③ Find the area of the overlapping object.
- ④ $\text{step 1} + \text{Step 2} - \text{Step 3}$