

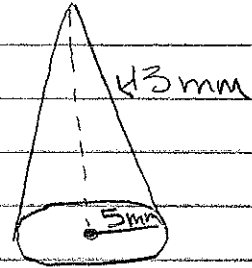
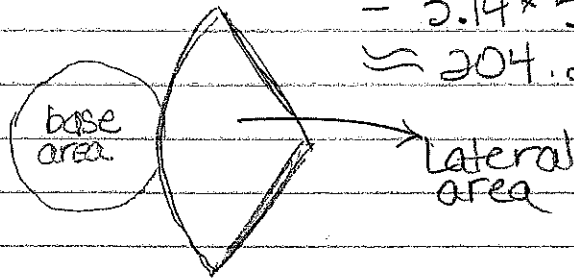
8.5

SURFACE AREA of a CONELateral Area of CONE

$$L.A. = \pi r l$$

$$= 3.14 \times 5 \times 13$$

$$\approx 204.2$$



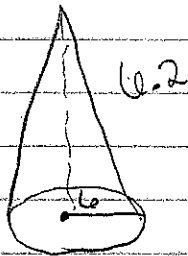
$l =$  slant height

Surface Area of CONE

$$S.A. = L.A. + \pi r^2$$

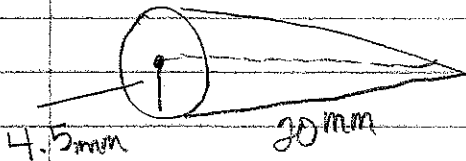
$$\downarrow$$

$$= \pi r l + \pi r^2$$



$$= \pi \cdot 6 \cdot 6.2 + \pi \cdot 6^2$$

$$\approx 230.0$$



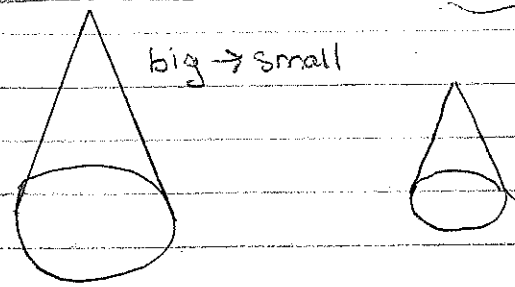
$$\pi \cdot (4.5) \cdot 20 + \pi (4.5)^2$$

$$282.6 + 63.59$$

$$S.A. \rightarrow 346.19$$

86

Surface Area of Similar Shapes



surface area } 500 in<sup>2</sup>

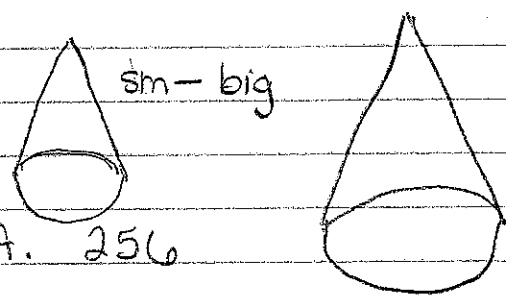
Scale factor } = 1/2

in order to find the surface area of the second shape:

$$\text{S.A. (original)} \times \left(\frac{\text{Scale factor}}{2}\right)^2$$

$$500 \times \left(\frac{1}{2}\right)^2$$

$$\frac{500}{1} \times \frac{1}{4} = \frac{500}{4} = 125$$

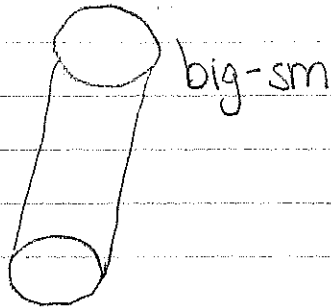


S.A. 256

Scale factor } 2

$$256 \times (2)^2 = 256 \times 4 = 1,024$$

cont'd



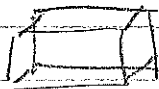
S.A 359


 scale }  $\frac{1}{3}$   
 factor }

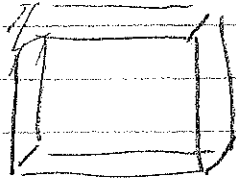
$$359 \times \left(\frac{1}{3}\right)^2$$

$$\frac{359}{1} \times \frac{1}{9} = 39.8 =$$


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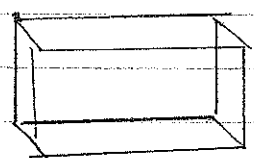


S.A 78

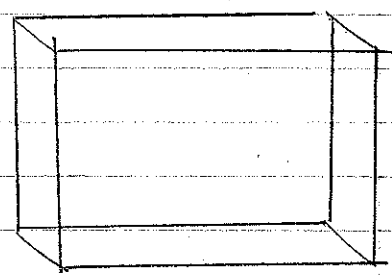

 scale 3  
 factor

$$78 \times 3^2 =$$

$$78 \times 9 = 702$$



Volume 64



Volume = ?

Scale factor  
3

$$64 \times (3)^3 = 1728 \rightarrow$$

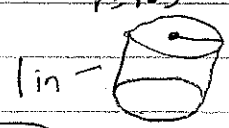
Volume 96

Scale factor  $\frac{1}{2}$

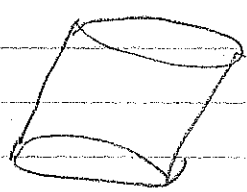
$$96 \times \left(\frac{1}{2}\right)^3$$

$$\frac{96}{1} \times \frac{1}{8} = \frac{96}{8} = 12$$

$r=1.5$



$2\pi rh + 2\pi r^2$   
S.A.



Scale factor  
40

$$2 \times 3.14 \times 1.5 \cdot 1 + 2 \times 3.14 \cdot 1.5^2$$

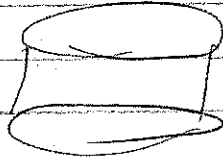
$$9.42 + 14.13$$

$$= 23.55 \times (40)^2 = 37,680 \text{ in}^2$$

23.55

42

$$r = 1.5$$
$$h = 1$$



$$\text{Volume} = \pi r^2 h$$

$$= 3.14 \cdot (1.5)^2 \cdot 1$$

$$= 7.065$$

$$7.065 \times (40)^2 = 452,160 \text{ in}^3$$