

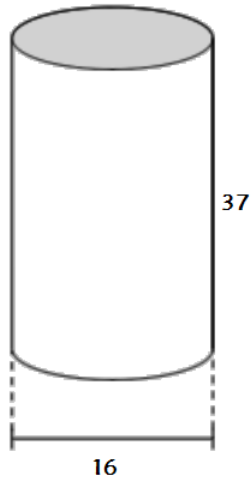


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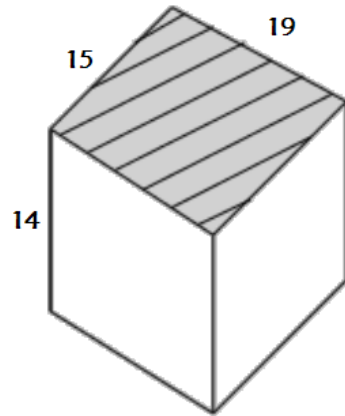
Surface Area and Volume

1. Calculate the surface area of the given objects.

1.1



1.2



2. Determine the value of x if the surface area of the cube is $97\,336\text{mm}^2$.

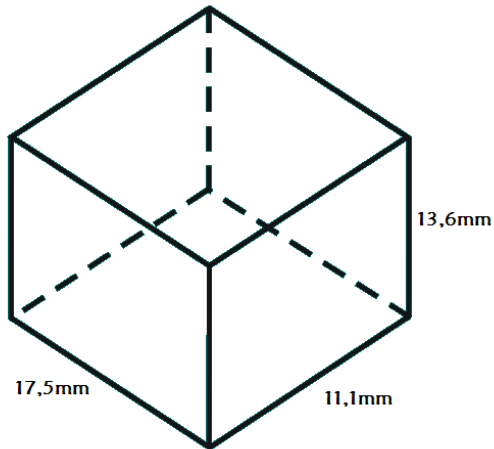




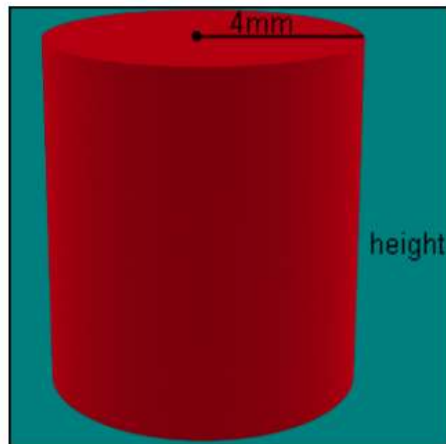
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3. What is the volume of the cube in cm^3 ?



4. Calculate the height of the cylinder if the volume is $904,32\text{mm}^3$.



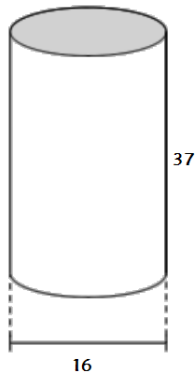


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MEMO

1. Calculate the surface area of the given objects. [9.4.1; 9.5.2.1; 9.5.3.1]

1.1

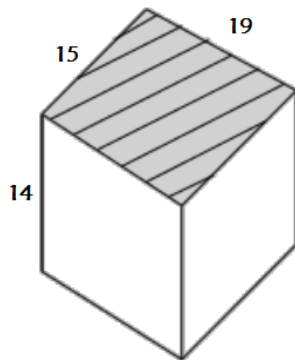


$$TSA = 2\pi r^2 + 2\pi rh$$

$$TSA = 2\pi(8)^2 + 2\pi(8)(37)$$

$$TSA = 2261,95$$

1.2



$$TSA = 2(14)(15) + 2(15)(19) + 2(14)(19)$$

$$TSA = 1522$$

2. Determine the value of x if the surface area of the cube is $97\,336\text{mm}^2$. [9.5.2.2; 9.5.6.1]



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x

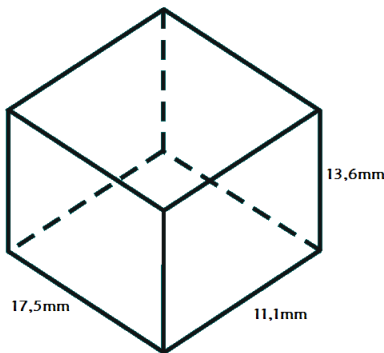
$$TSA = 6x^2$$

$$97336 = 6x^2$$

$$\therefore x = 127,37mm$$

3. What is the volume of the cube in cm^3 ?

[9.5.2.2; 9.5.2.3]



$$1mm = 0,1cm$$

$$Volume = L \times B \times H$$

$$Volume = 1,75cm \times 1,1cm \times 1,36cm$$

$$Volume = 2,6418cm^3$$

4. Calculate the height of the cylinder if the volume is $904,32mm^3$. [9.5.6.1]



$$Volume = \pi r^2 h$$

$$904,32 = \pi \times (4)^2 \times h$$

$$\therefore h = \frac{904,32}{50,2655} = 18mm$$