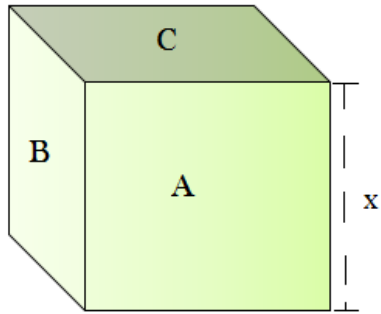


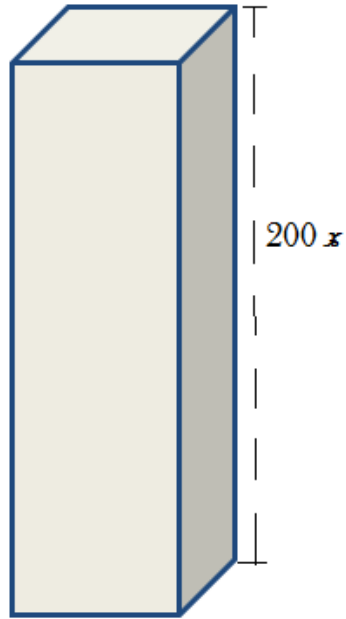
Algebra and Area and Volume

1. .



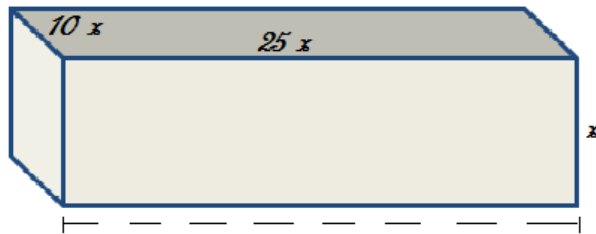
- i. In the cuboid above, the height is x m , with surface area of the face $A=x^2$ and $B=2x^2$. What is the surface area of C?
- ii. If the overall surface area of the box is 90 m^2 , what is the value of x ?

2. . A skyscraper is $200x$ tall, and has a base that is square with area $64x^2$. If the

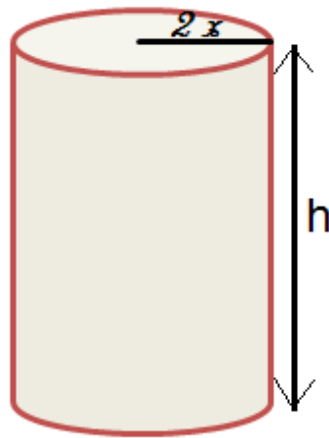


height of each storey is $\frac{1}{2}$ the base width, how many storeys are there?
If each storey is 3m high, how tall is the building?

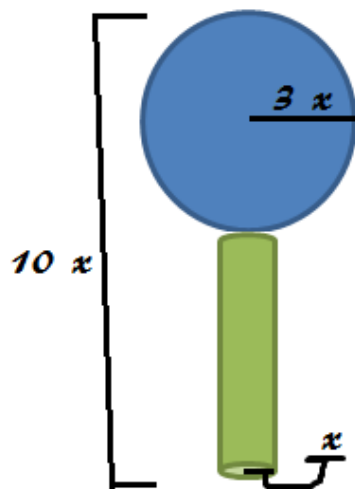
3. The following pool has volume 2000 m^3 . How long is it?



4. The following cylinder has radius $(2x)$ m and volume $(16\pi x^3)\text{m}^3$. Calculate the ratio of height : radius

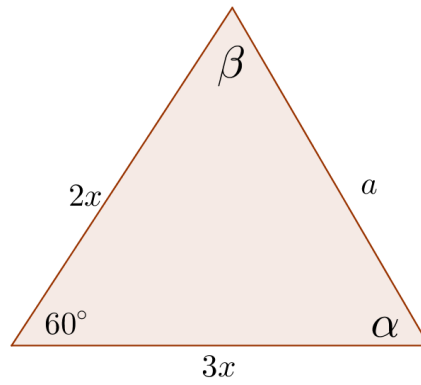


5. A maraca instrument consists of a sphere sitting on a cylindrical handle.



- Calculate the volume of the instrument in terms of x
- If the volume of the instrument is 1080π , find the value of x

6. i. What is the side a in terms of x ?



- ii. Can you then calculate angle α ?
iii. Can you calculate angle β ?