

## Volume

$6^{\text {th }}$ Grade Mathematics
Mr. Wong

# Volume - is the amount of cubes it takes to fill an object 

The bottom layer has
18 cubes. $6 \cdot 3=18$
Each layer has 18 cubes.
There are 5 layers

$$
18 \cdot 5=90 \text { cubes }
$$



# Volume of a rectangular prism. 



Volume $=$ length $\cdot$ width $\bullet$ height


$$
\mathrm{V}=\mathrm{l} \bullet \mathrm{w} \cdot \mathrm{~h}
$$

## Ex. 1 Find the volume.

$$
\begin{aligned}
& \mathrm{V}=\mathrm{l} \cdot \mathrm{w} \cdot \mathrm{~h} \\
& \mathrm{~V}=11 \cdot 4 \cdot 7
\end{aligned}
$$



11 cm
$\mathrm{V}=308 \mathrm{~cm}^{3}$


## Volume of a cylinder.



Volume $=$ pi $\cdot(\text { radius })^{2} \bullet$ height


$$
\mathrm{V}=\pi \cdot \mathrm{r}^{2} \cdot \mathrm{~h}
$$

## Ex. 2 Find the volume.

$$
\begin{aligned}
\mathrm{V} & =\pi \cdot \mathrm{r}^{2} \cdot \mathrm{~h} \\
\mathrm{~V} & =3.14 \cdot 3^{2} \cdot 5 \\
\mathrm{~V} & =3.14 \cdot 9 \cdot 5 \\
\mathrm{~V} & =28.26 \cdot 5 \\
\mathrm{~V} & =141.3 \mathrm{in}^{3}
\end{aligned}
$$

