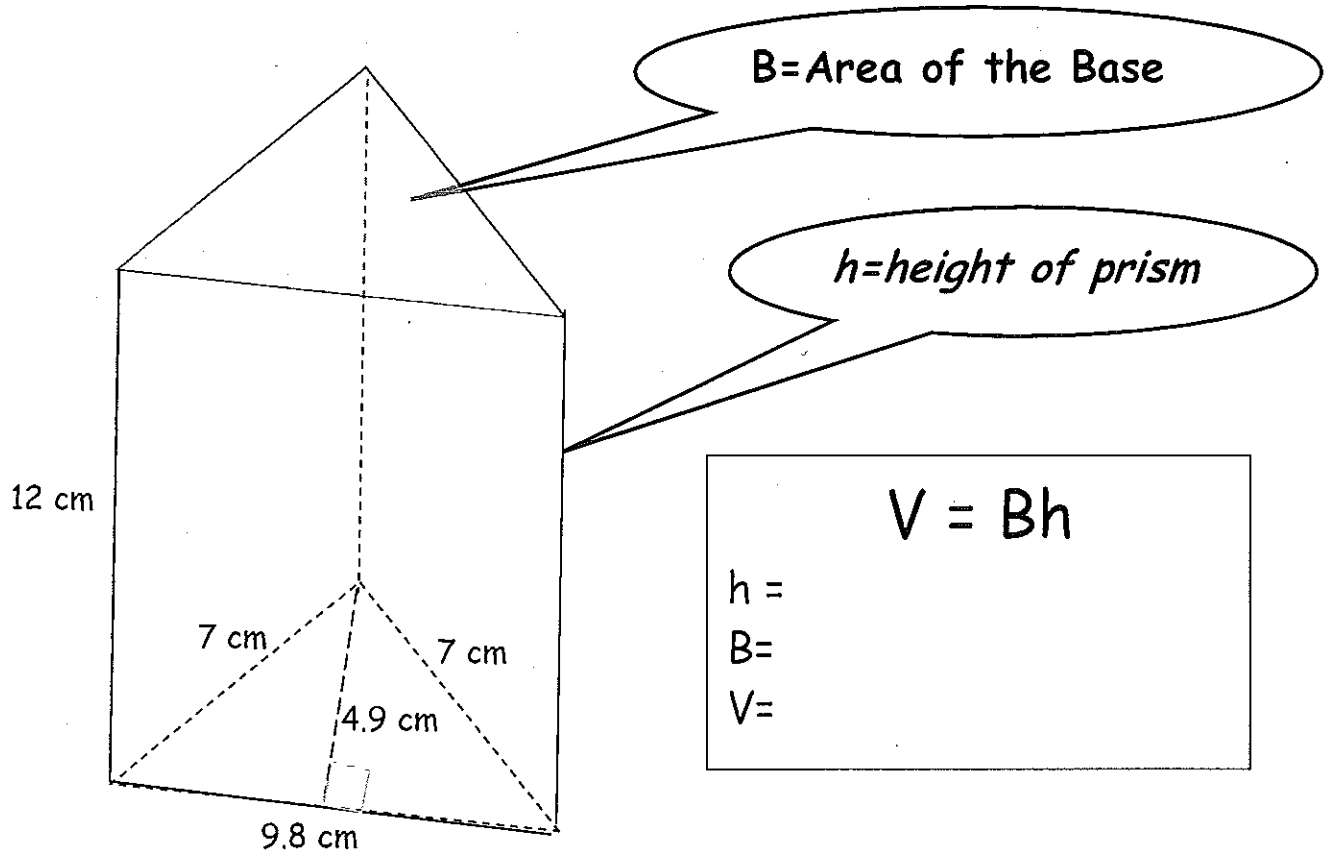
Volume of a Prism and a Cylinder

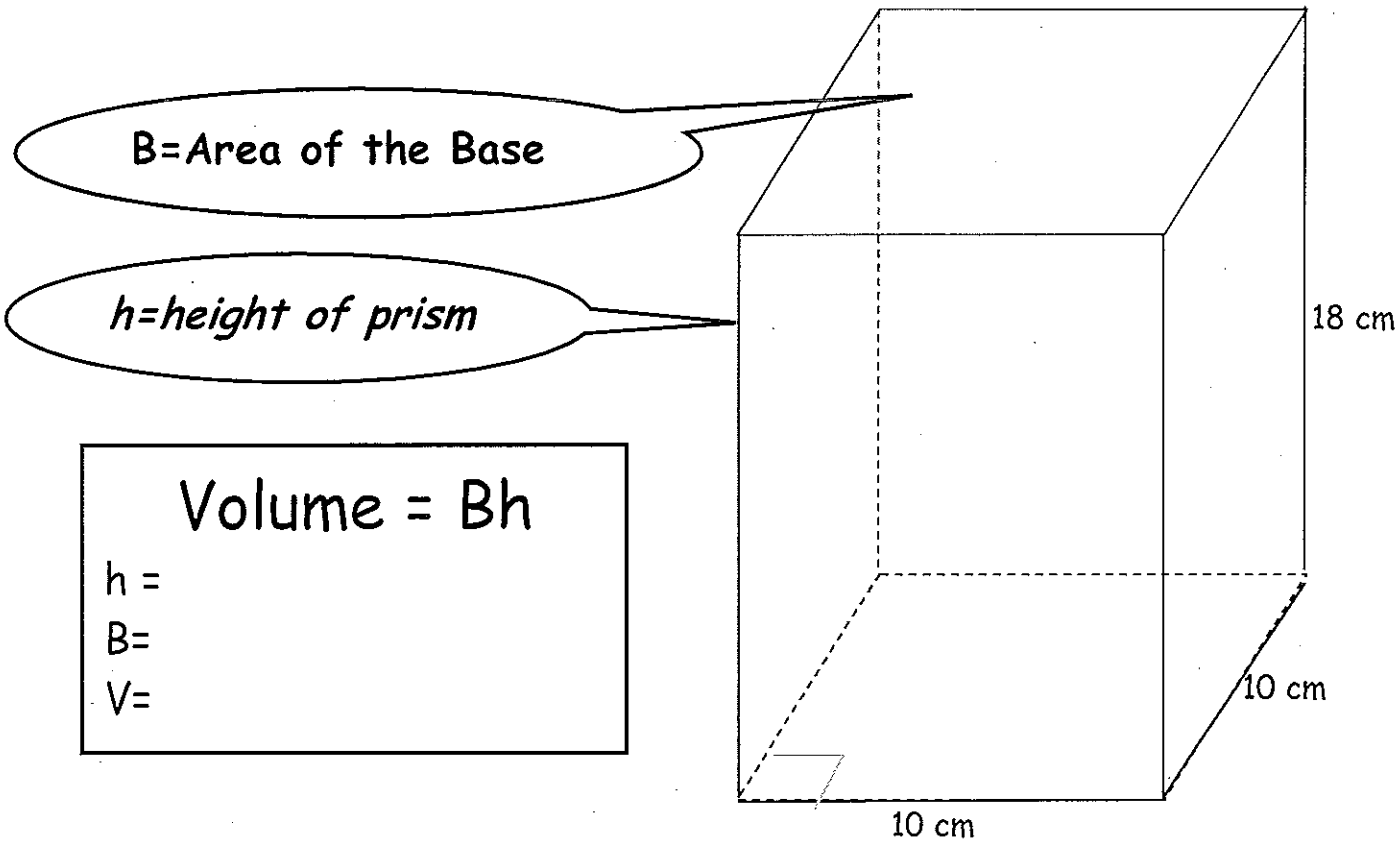


$$V = Bh$$

h =

B=

V=

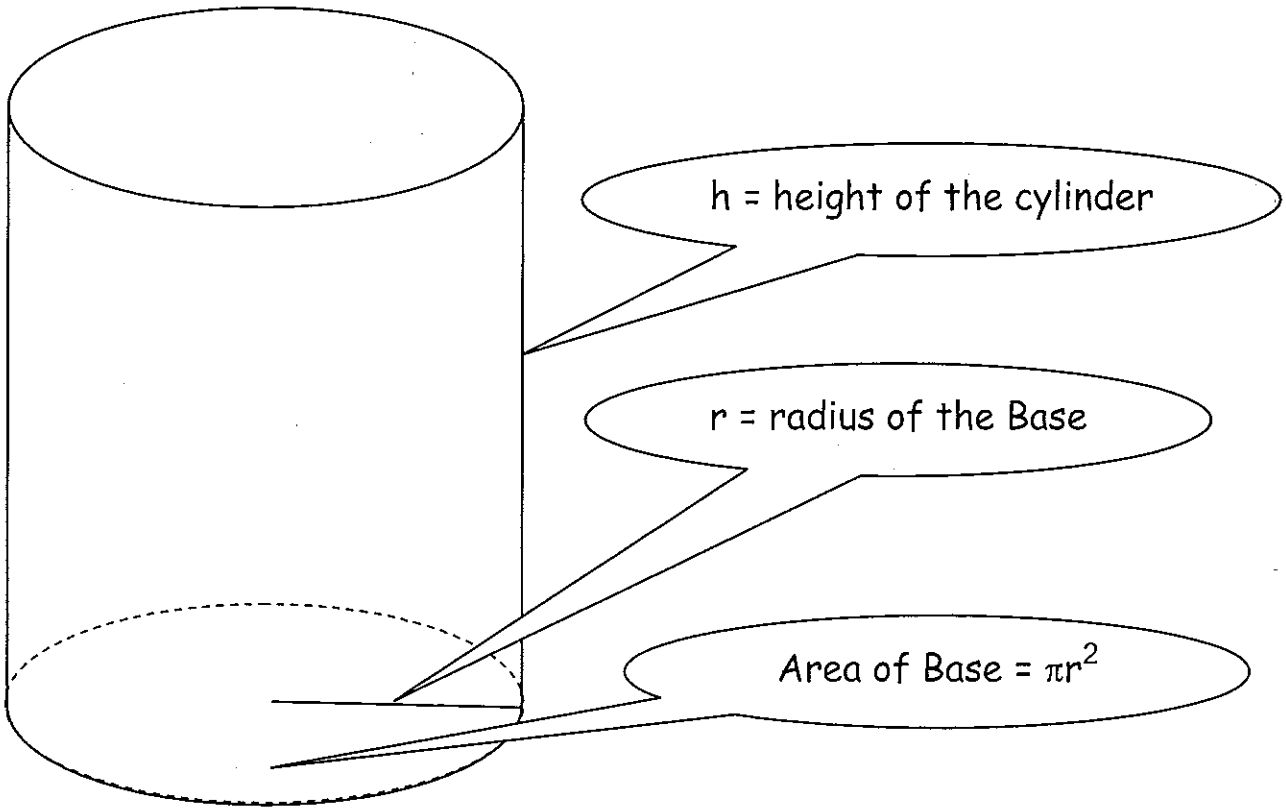


$$Volume = Bh$$

h =

B=

V=



The volume is similar to the prism.

$V = Bh$

Since $B = \pi r^2$, the cylinder formula becomes

$V = \pi r^2 h$

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

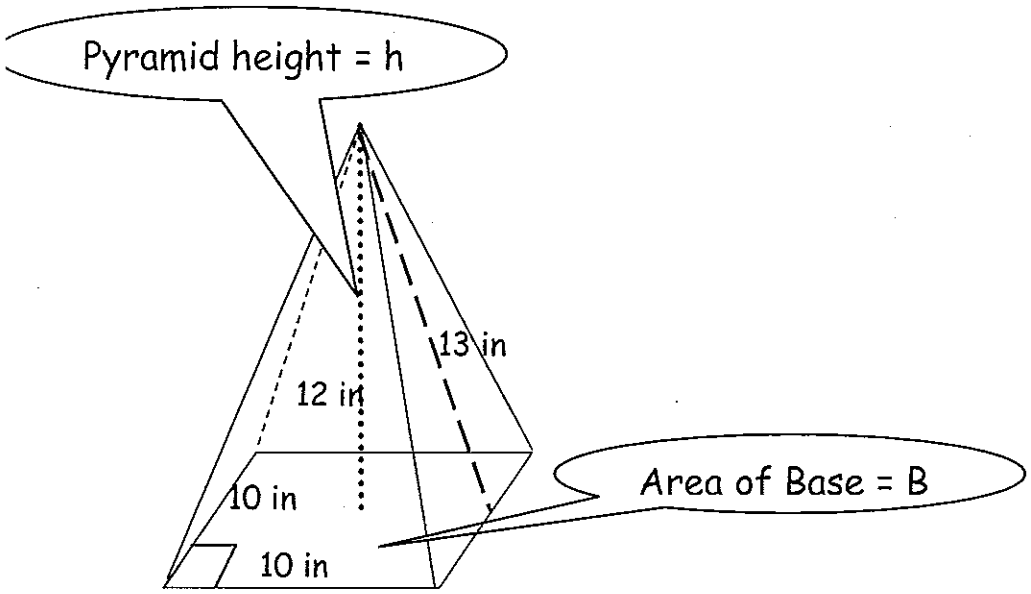
r=

h=

V=

Volume of a Pyramid and a Cone

Pyramids and Cones



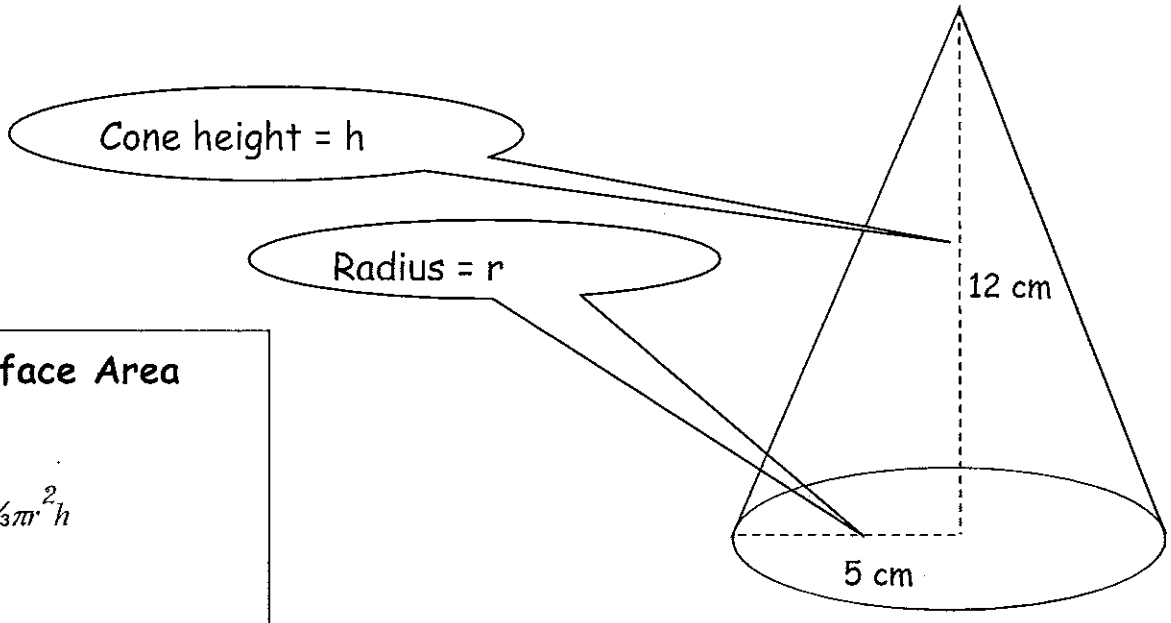
Volume

$V = \frac{1}{3}Bh$

B=

H =

V=



Surface Area

$V = \frac{1}{3}\pi r^2 h$

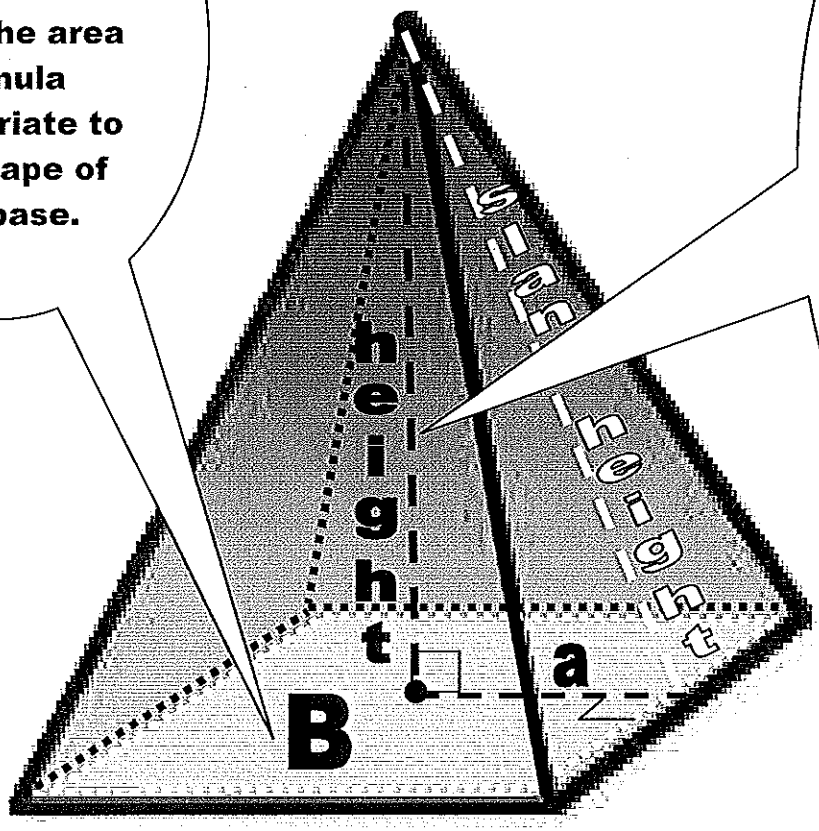
r=

h=

V=

How do you find the volume of a pyramid?

1ST
Find the area of the base "B" using the area formula appropriate to the shape of the base.



2ND
Find the height and multiply of the base by the height "h".

3RD
Substitute in the volume

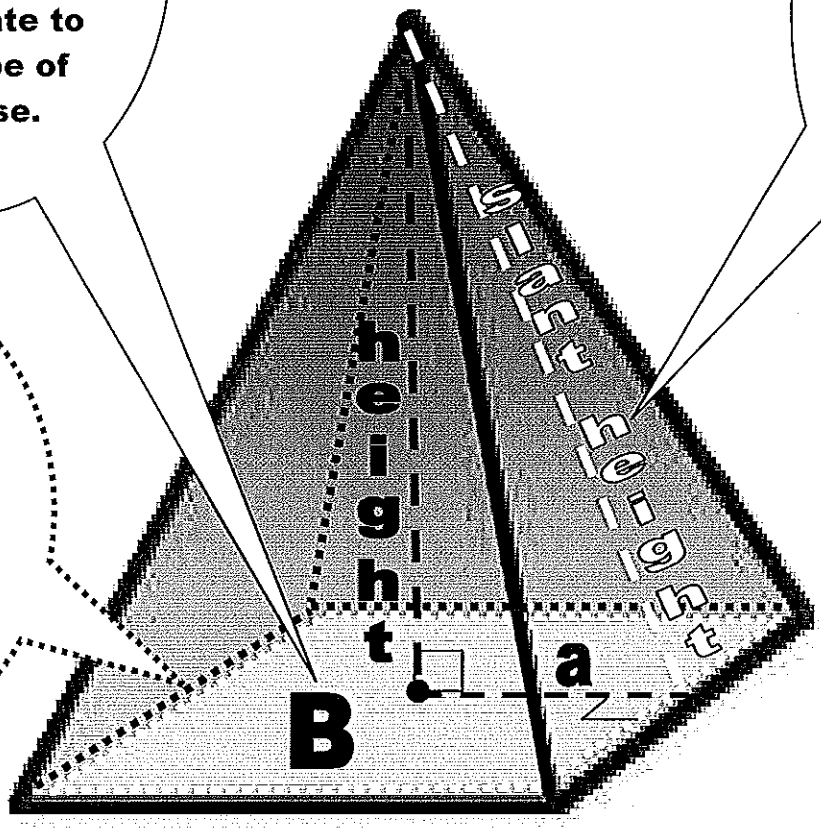
Use the volume formula

$$V = \frac{1}{3} Bh$$

How do you find the surface area of a pyramid?

1ST
Find the area of the base "B" using the area formula appropriate to the shape of the base.

2ND
Find the perimeter "p" of the base and take ½ of it.



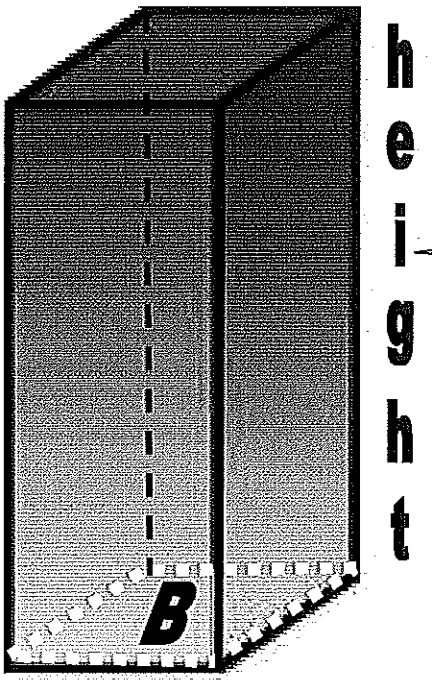
3RD
Find the slant height "ℓ" and multiply by ½ p.

4TH
Substitute in the surface area formula.

Use the surface area formula

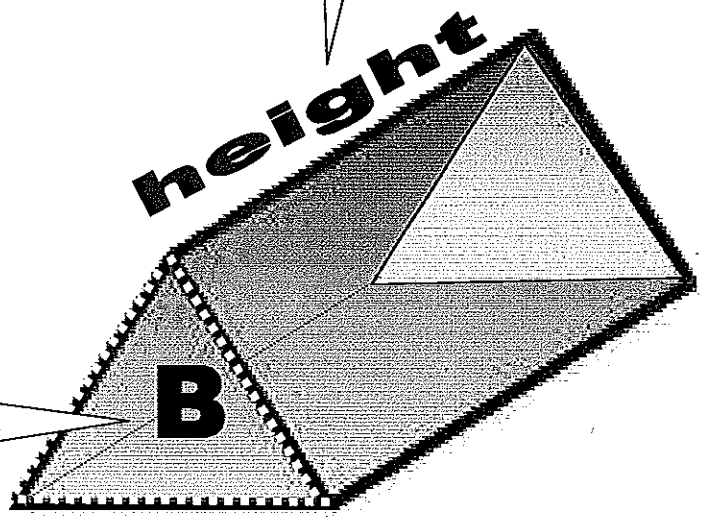
$$SA = B + \tfrac{1}{2} p\ell$$

How do you find the volume of prism?



h e i g h t

2ND
Find the height "h" and multiply the area of the base by it.

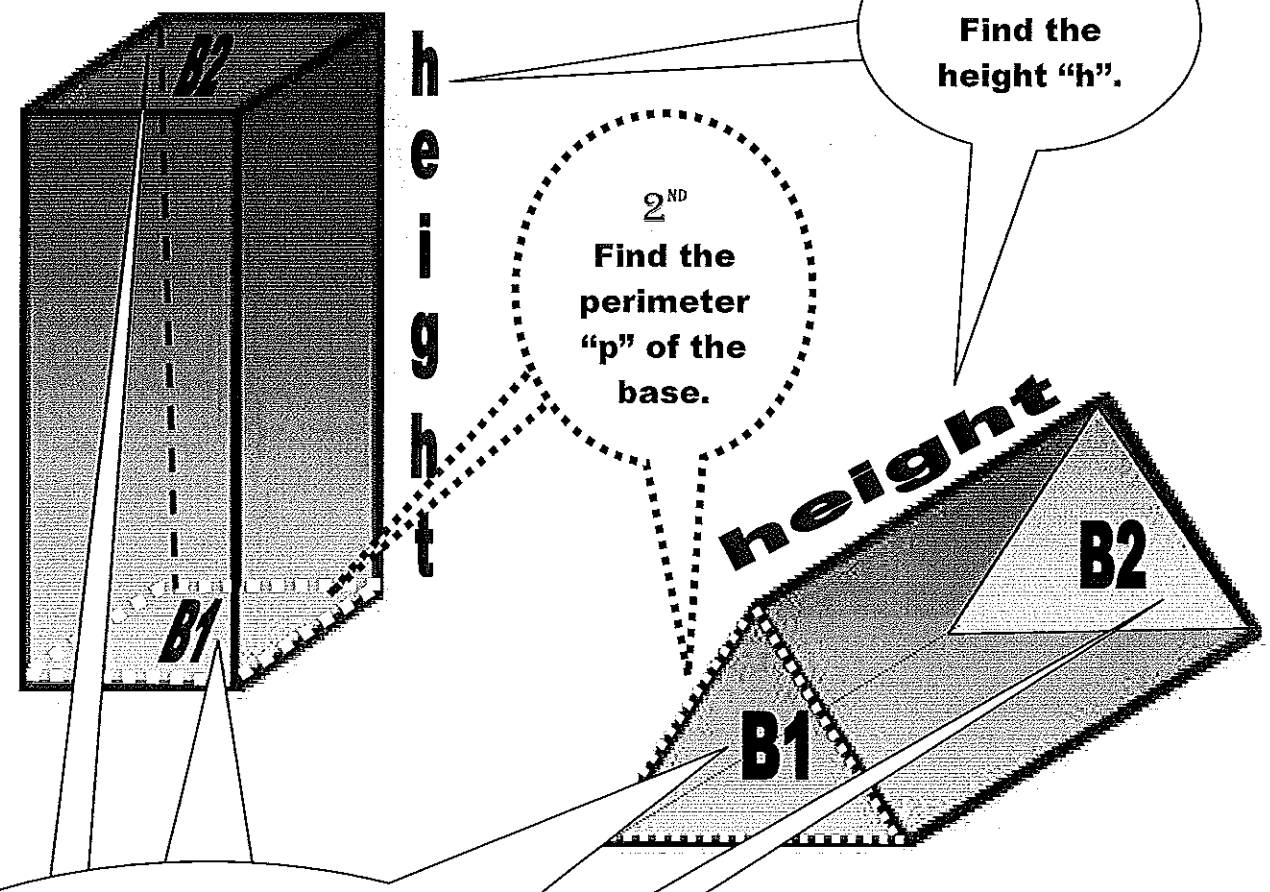


1ST
Find B, the area of the base by using the appropriate area formula.

Use the volume formula

V=Bh

How do you find the surface area of a prism?



3RD
Find the height "h".

2ND
Find the perimeter "p" of the base.

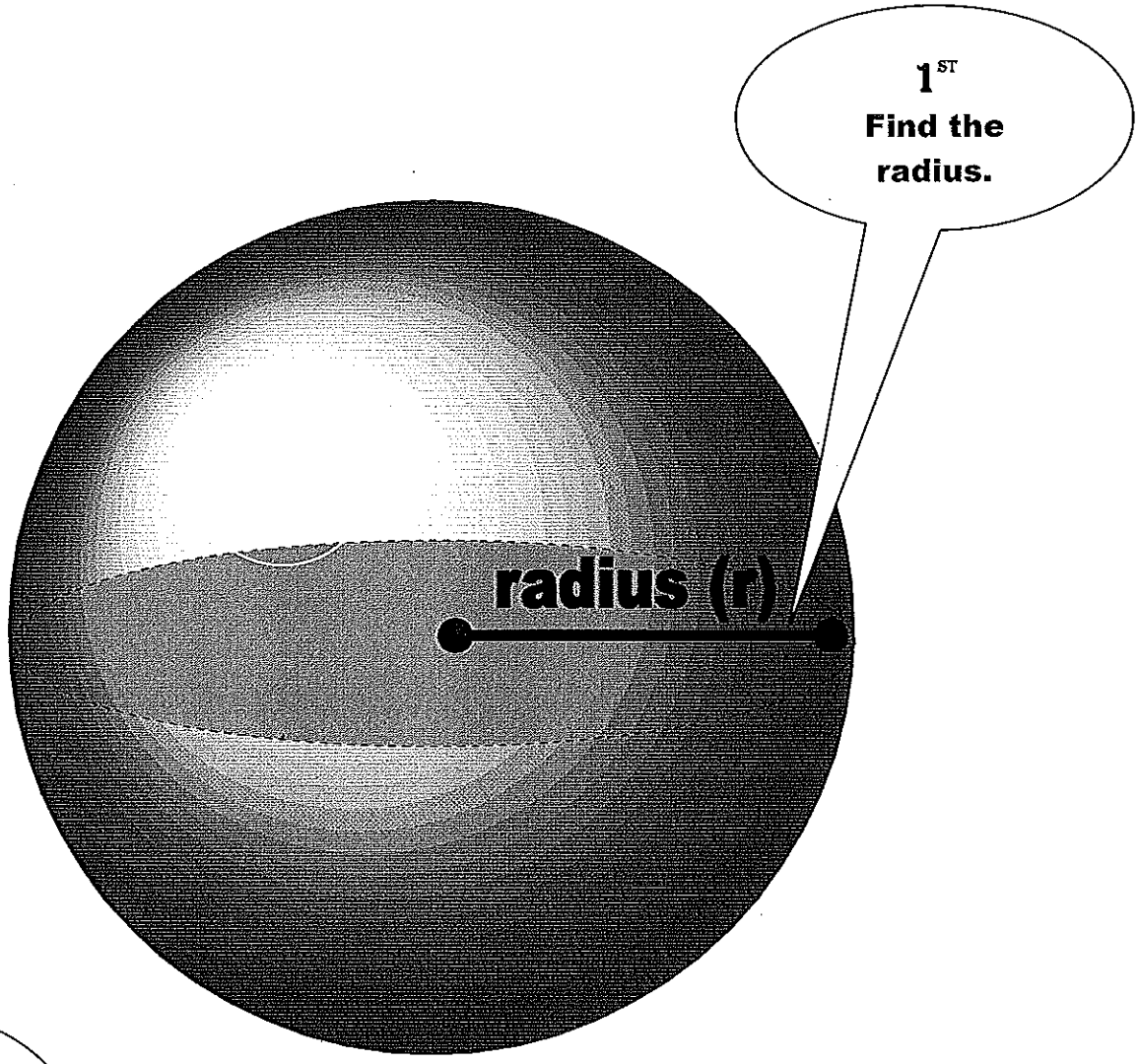
1ST
Find the area of the base "B1" using the appropriate area formula, then multiply that by 2 to include base B2.

4TH
Substitute in the formula.

Use the surface area formula

SA = 2B + ph

How do you find the volume of a sphere?

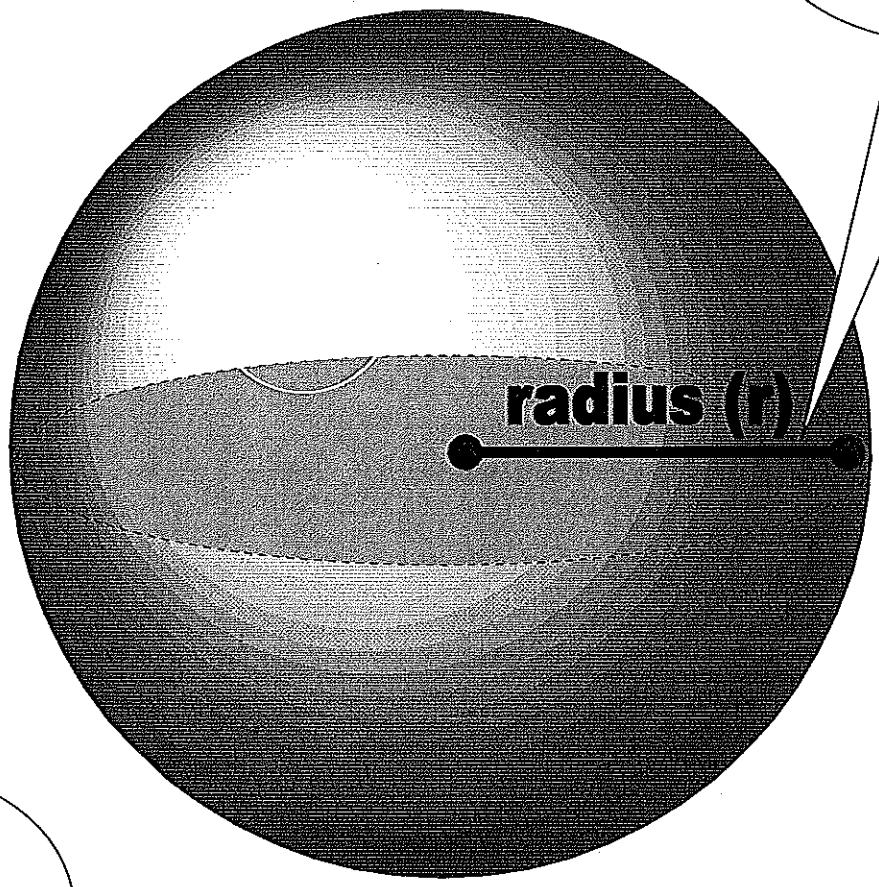


2ND
Substitute in the formula.

Use the volume formula

$$V=\frac{4}{3}\pi r^3$$

How do you find the surface area of a sphere?



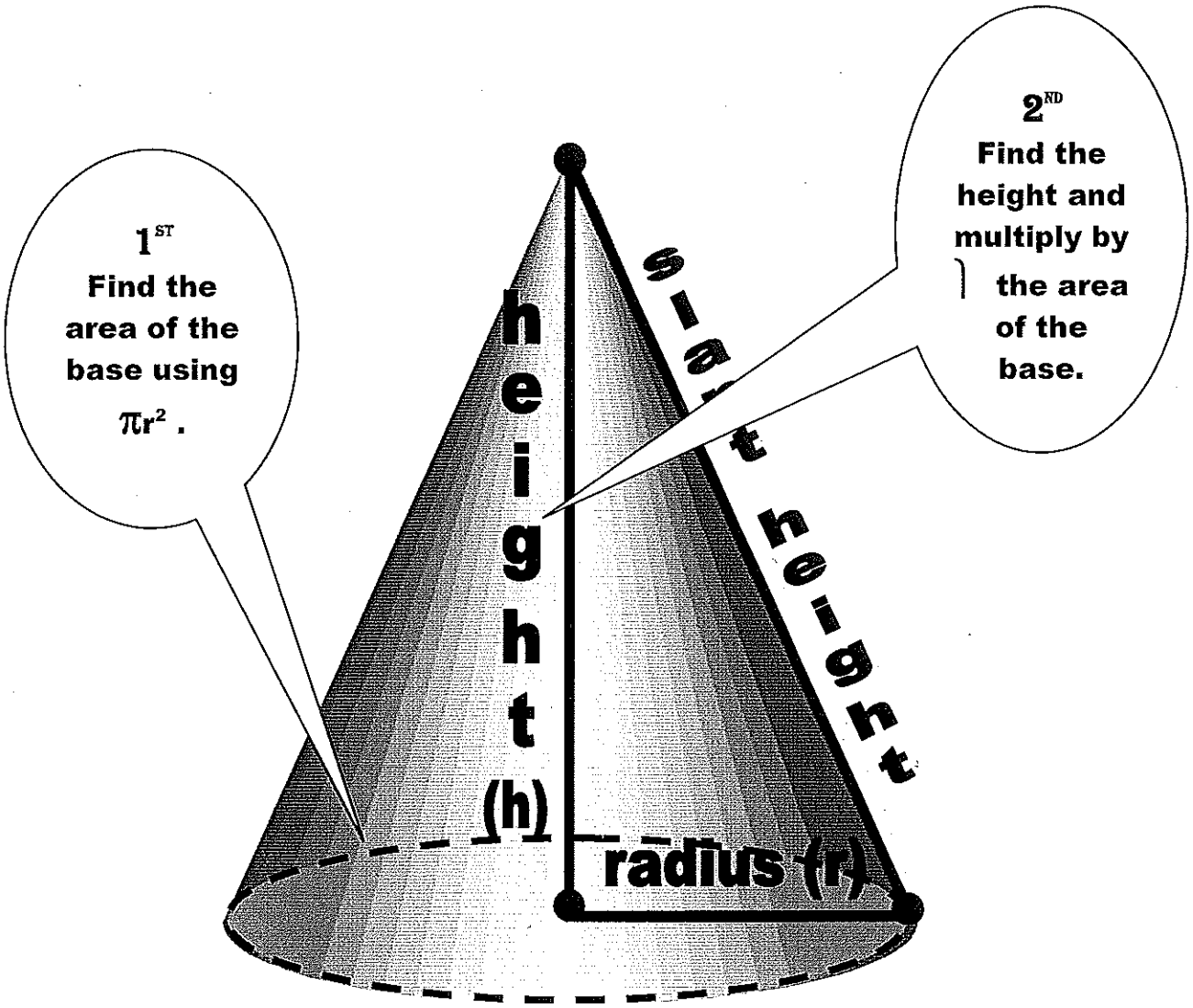
1ST Find the radius.

2ND Substitute in the formula.

Use the volume formula

$$SA=4\pi r^2$$

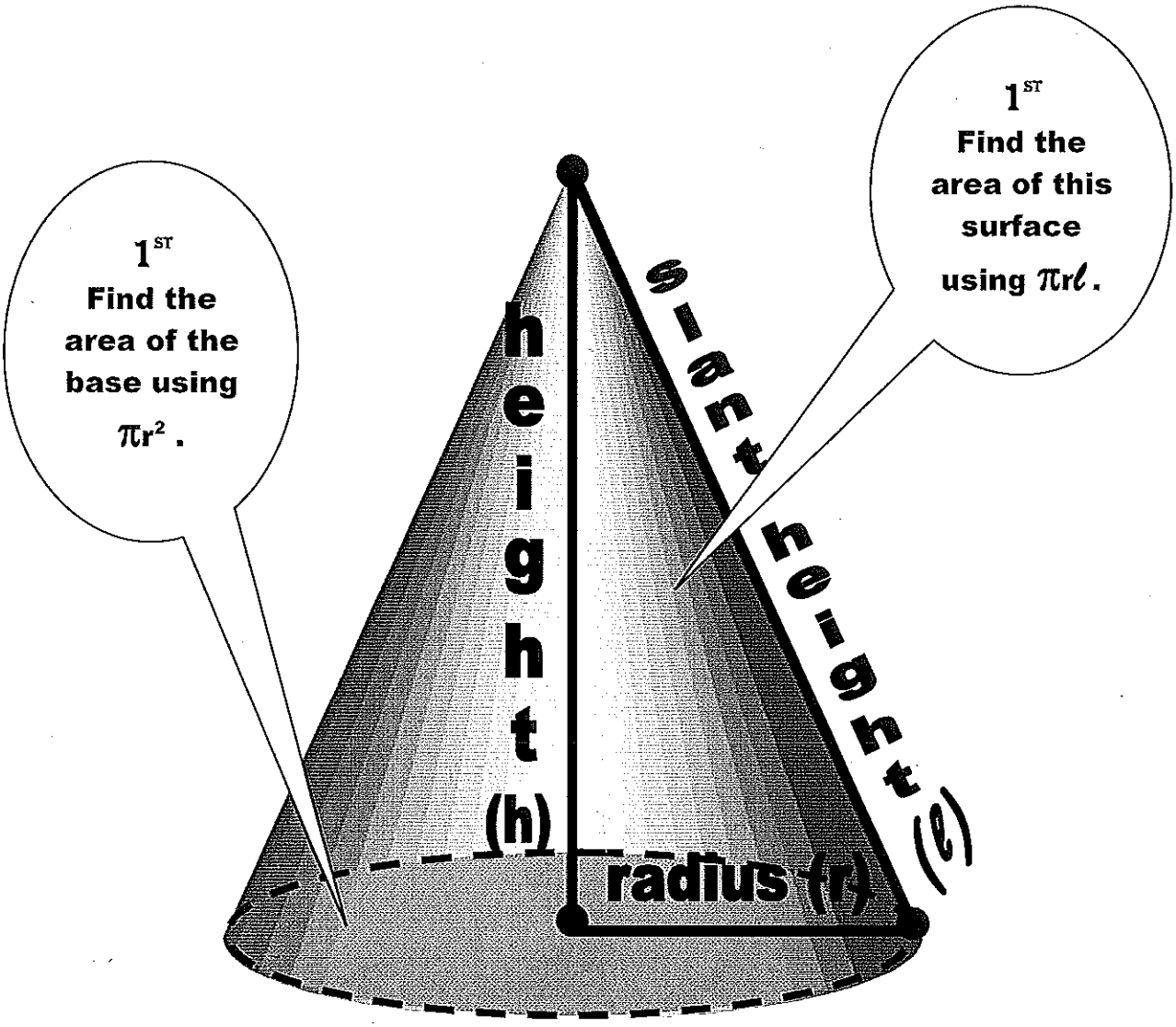
How do you find volume of a cone?



Use the volume formula

$$V=\frac{1}{3}\pi r^2 h$$

How do you find surface area of a cone?

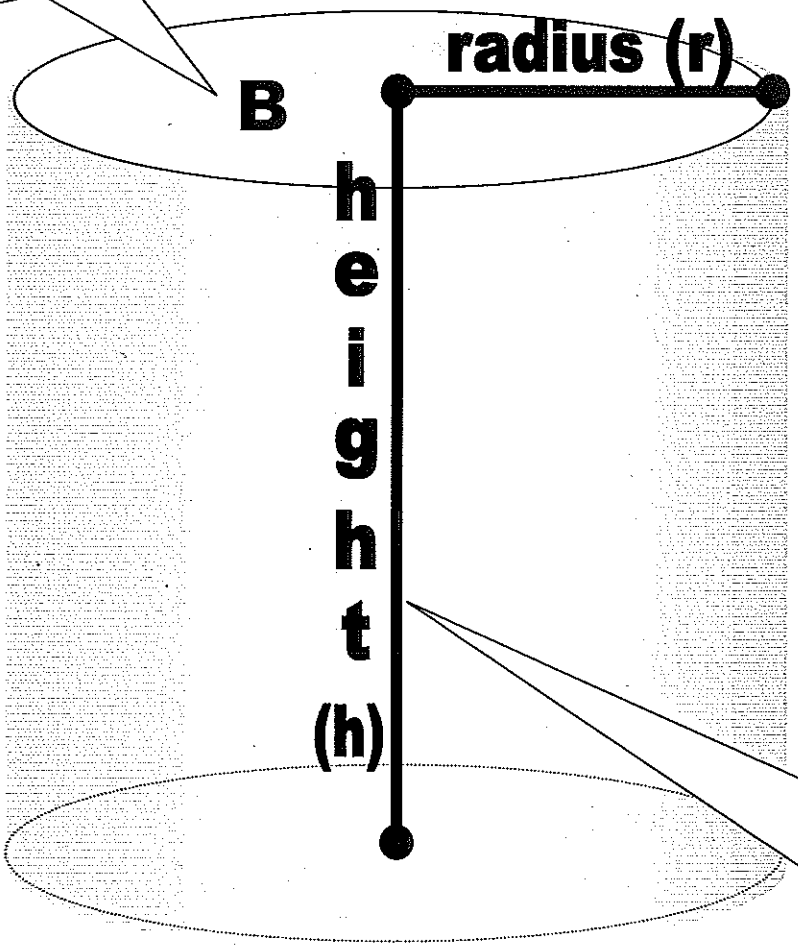


Finally, use the surface area formula

$SA = \pi r^2 + \pi r \ell$

How do you find the volume of a cylinder?

1ST
Find the area of the base "B" using πr^2 .

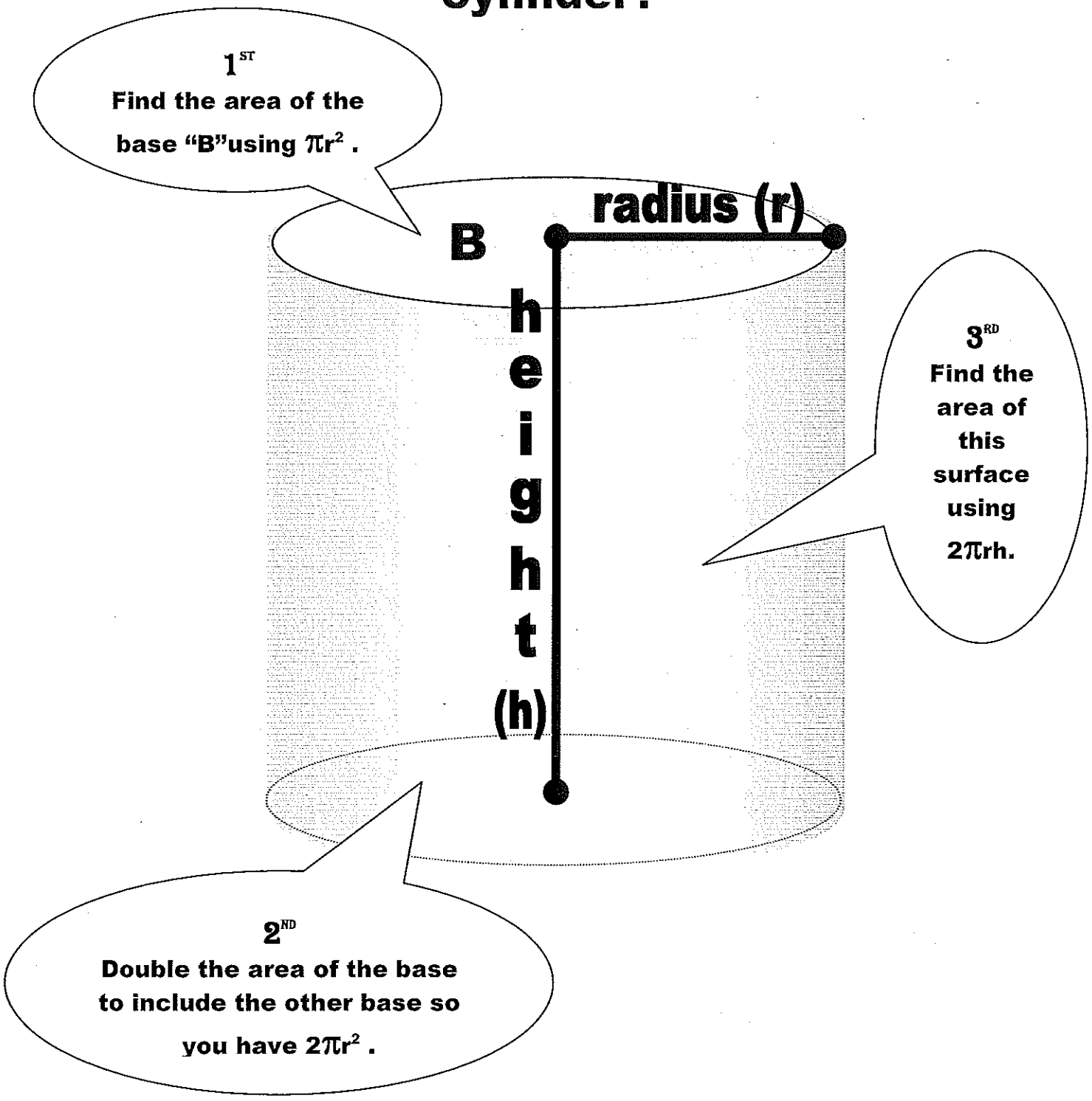


2ND
Multiply the area of the top by the height "h".

Use the volume formula

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

How do you find the surface area (SA) of a cylinder?



Finally, use the surface area formula

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