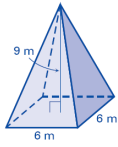


9.4 Volume of Prisms and Cylinders

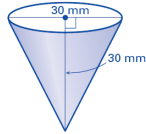
GOAL Find the volumes of prisms and cylinders.
Warm Up

Find the surface area of the solid. If necessary, round your answer to the nearest whole number.

1.



2.



3. Find the lateral area of a right cone with radius 5 inches and slant height 22 inches. Round your answer to the nearest whole number.

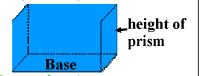
Mar 20-9:39 AM

Volume of a solid: the number of cubic units (units³) contained in its interior.

Volume of a Prism

Volume = (area of the base) (height of the prism)

$$V = B h$$



Find the Volume of a Prism

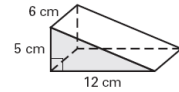
Find the volume of the prism.

SOLUTION

Write the formula for volume of a prism.

Area of triangular base times the height of prism

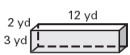
Simplify.



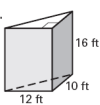
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Find the volume of the prism.

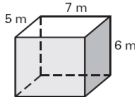
1.



2.



3.



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Volume of a Cylinder

Volume = (area of the base) times (height of the cylinder)

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

Find the Volume of a Cylinder

Find the volume of the cylinder. Round your answer to the nearest whole number.

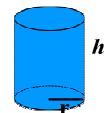
SOLUTION

Write the formula for volume of a cylinder.

Substitute 3 for r and 25 for h .

Simplify.

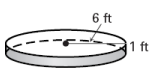
Multiply.



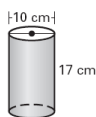
Mar 20-9:53 AM

Find the volume of the cylinder. Round your answer to the nearest whole number.

4.



5.



Mar 20-10:05 AM