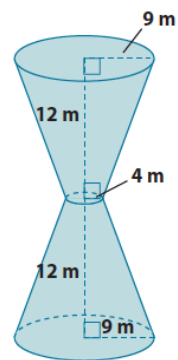


### Lesson Summary

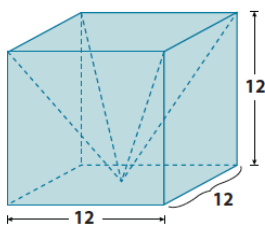
Composite solids are figures comprising more than one solid. Volumes of composite solids can be added as long as no parts of the solids overlap. That is, they touch only at their boundaries.

### Problem Set

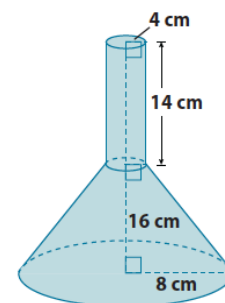
1. What volume of sand is required to completely fill up the hourglass shown below? Note: 12 m is the height of the truncated cone, not the lateral length of the cone.



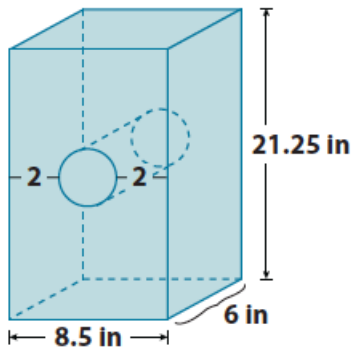
2.
  - a. Write an expression for finding the volume of the prism with the pyramid portion removed. Explain what each part of your expression represents.



- b. What is the volume of the prism shown above with the pyramid portion removed?
3.
    - a. Write an expression for finding the volume of the funnel shown to the right. Explain what each part of your expression represents.
    - b. Determine the exact volume of the funnel.



4. What is the approximate volume of the rectangular prism with a cylindrical hole shown below? Use 3.14 for  $\pi$ . Round your answer to the tenths place.



5. A layered cake is being made to celebrate the end of the school year. What is the exact total volume of the cake shown below?

