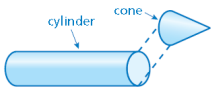
Math 7H - Unit 5

Day 15 - Surface Area of Composite Solids

Lesson Objectives:

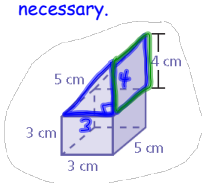
- I can draw geometric shapes with given conditions.
- I can solve real-world and mathematical problems involving surface area of three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

A **composite solid** is a figure made up of more than one solid.



When composite solids are made, certain portions of the original surface area may be covered up, meaning the area is no longer exposed. The covered up area does NOT count towards the total surface area of the solid.

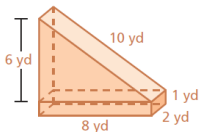
Identify the solids that make up the composite solid. Then find the surface area. Round your answer to the nearest tenth, if necessary.



Rectangular Prism
$2(9)+2(15)+15$
$18+30+15=63cm^2$

Triangular Prism
$2(6)+20+25$
$12+45=57cm^2$
$63+57=120cm^2$

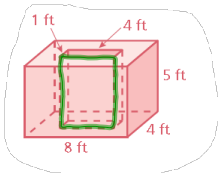
Identify the solids that make up the composite solid. Then find the surface area. Round your answer to the nearest tenth, if necessary.



Triangular Prism
$2(24)+20+12$
$48+32=80\ yd^2$

Rectangular Prism
$2(8)+2(2)+16$
$16+4+16=36\ yd^2$
$80+36=116\ yd^2$

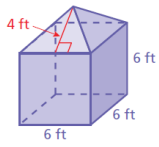
Identify the solids that make up the composite solid. Then find the surface area. Round your answer to the nearest tenth, if necessary.



Outer Rectangular Prism
$2(40)+2(20)+2(32)-2(4)$
$80+40+64-8$
$120+56=176ft^2$

Inner Rectangular Prism
$2(20)+2(5)$
$40+10=50ft^2$
$176+50=226ft^2$

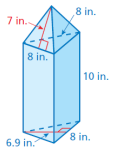
Identify the solids that make up the composite solid. Then find the surface area. Round your answer to the nearest tenth, if necessary.



Square Pyramid
$4(12)=48ft^2$

Cube
$5(36)=180ft^2$
$180+48=228ft^2$

Identify the solids that make up the composite solid. Then find the surface area. Round your answer to the nearest tenth, if necessary.



Triangular Pyramid
$3(28) = 84 in^2$

Triangular Prism
$27.6 + 3(80) = 267.6 in^2$

$84 + 267.6 = 351.6 in^2$

Homework

Surface Area of Composite Solids WKS

* Individual Think Time *

What to do if you get stuck...

1. Reread the problem. Did you write it down correctly?
2. Reread your notes. Is there a problem similar that we did together in class?
3. Find a problem similar in your book. Try this one to see if it helps.
4. Skip the problem until the end of Individual Think Time. Then ask an "educated" question of a neighbor or Mrs. Call.

Today we're working by...