

**Topic: Surface Areas
of Composite Objects**

Name: _____

Class: Math 9

Date: _____

**Questions/Main
Ideas:**

Notes:

Goals:

1. Determine the surface areas of composite objects.

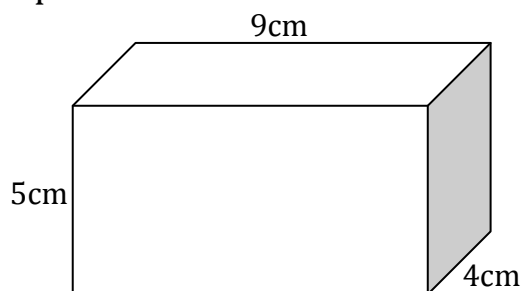
For composite objects involving right prisms, we can use formulas to determine surface areas of the prisms.

1. A right rectangular prisms have 3 pairs of congruent faces:
 - the top and bottom
 - the front and back
 - the left side and right side

The surface area is the sum of the area of the faces.

Surface Area = $2 \times$ area of top + $2 \times$ area of front + $2 \times$ area of side

Example:



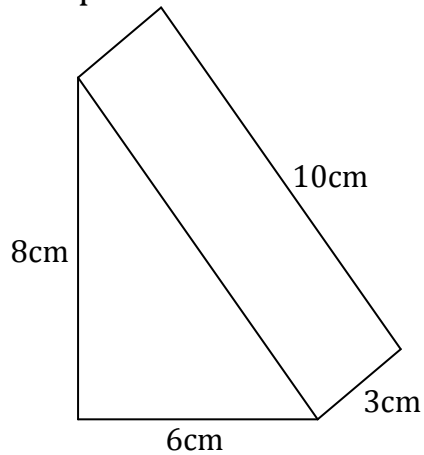
2. A right triangular prism has 5 faces:

- 2 congruent triangular faces
- 3 rectangular faces

The surface area of a triangular prism is the sum of the all 5 faces.

Surface area = $2 \times$ area of triangle + areas of rectangular faces

Example:



3. A cylinder has three surfaces:

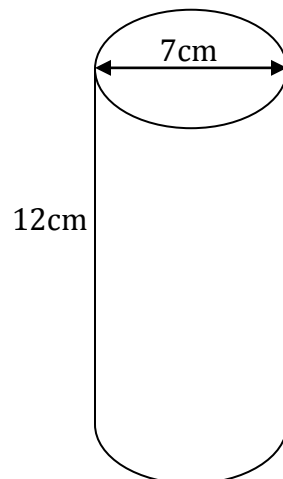
- 2 congruent circular bases
- 1 curved surface

The surface area of a cylinder is the sum of all surfaces.

SA = $2 \times$ area of circular base + circumference of base \times height of cylinder

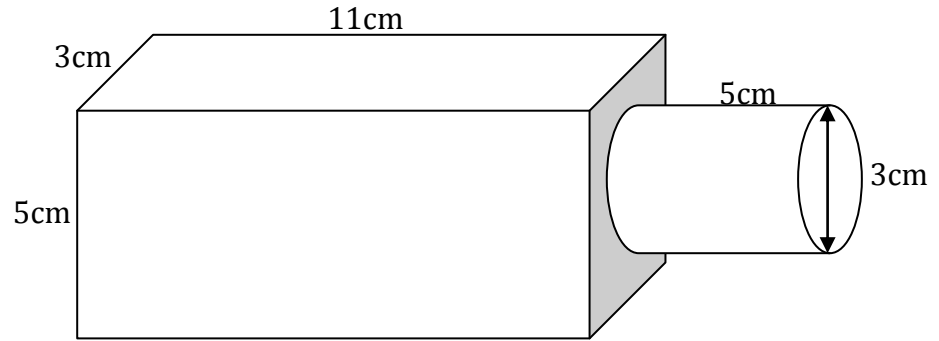
Surface Area = $2 \times \pi r^2 + 2\pi r \times$ height

Example:



Example:

1. Find the surface of the following composite object.



2. Find the surface area of the composite object.

