**Math 6 Unit 5: Area and Volume Study Guide** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per.\_\_\_\_\_

3/4 in.

1. Determine the VOLUME and the SURFACE AREA of

the cube pictured at right.

1. Find the area of the shaded section of the square below.

8 m

1. Find the area of the triangle pictured below.

9 ¼ cm

10 cm

 13 cm

7.5 cm

1. The dimensions for two boxes ae shown in the table.

|  |  |  |
| --- | --- | --- |
| **Dimensions** | **Box A** | **Box B** |
| **Height** | 8.5 | 10 |
| **Width** | 2 | 1.8 |
| **Length** | 4.8 | 5 |

Which box has a greater volume? \_\_\_\_\_\_\_\_\_\_\_\_\_ By how much? \_\_\_\_\_\_\_\_\_\_\_

1. Determine the area of the trapezoid.

2 cm

2 cm

36 cm

16 cm

1. Find the area of the composite figure shown below.



1. What is the difference between AREA and SURFACE AREA?
2. What is the difference between SURFACE AREA and VOLUME?
3. Determine the surface area of a rectangular prism with a length of 7 cm, a width of 6 cm, and a height of 4 cm. Use the pictures if need to help you solve.

SA = \_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. If sod grass can be purchased at $0.50 per square foot, how much would it cost to put sod in a backyard shaped like a rectangle that is 15 feet wide and 25 feet long?



1. How many square centimeters of wrapping paper are needed to cover the surface area of the box shown to the right?
2. The volume of a rectangular prism can be found by using the formula *V = Bh,* where *B* is the area of the base. If the base of a prism is square with a side length of 4 inches and the height of the prism is  inches, find the volume of the prism.
3. What is the surface area of the square pyramid shown?



1. A rectangular prism is filled with small cubes of the same size. The bottom layer consists of 6 cubes, each with a volume of 1 cubic cm. If there are 3 layers of cubes in the prism, what is the volume of the rectangular prism?

Volume = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Find the area of the non-shaded region.



1. Find the area of the shaded pentagon.

**4yd 4in**

 **4in**

**3yd**

18 yd

5yd

1. Mary wants to carpet a portion of her rectangular room. She wants to leave the two congruent triangles bare wood without carpet. Each of the triangles has a base of 8 feet and a height of 12 feet. What is the area of the carpeted flooring she will need?

Area = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**40 feet**

**17 feet**