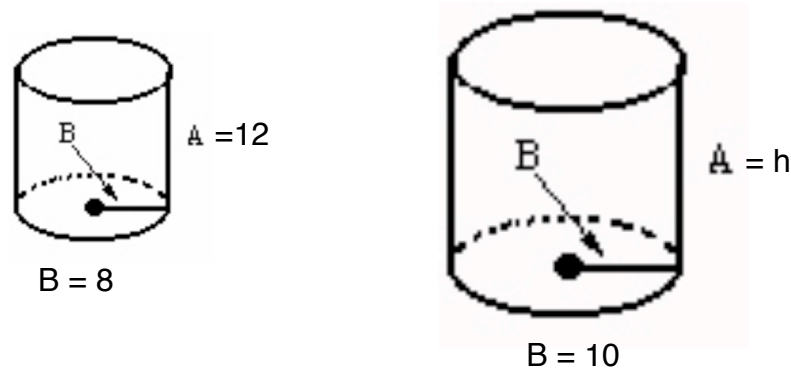


Chapter 9: Surface Area/ Volume
Lesson 9-5: Similar Objects
Classwork

name _____
date _____
period ____



Suppose the two right cylinders shown are similar. find:

- _____1. The scale factor.
- _____2. Write a proportion and solve for h.
- _____3. the ratio of base areas.
- _____4. the ratio of lateral areas.
- _____5. the ratio of volumes.

Complete the table about similar solids.

	1.	2.	3.	4.	5.	6.	7.	8.
ratio of corresponding segments	3:4	2:3	1:5	5:8				
ratio of areas					9:25			81:1
ratio of volumes						64:27	1:216	

Questions 9- 11 refer to two similar prisms with a scale factor of 3:7.

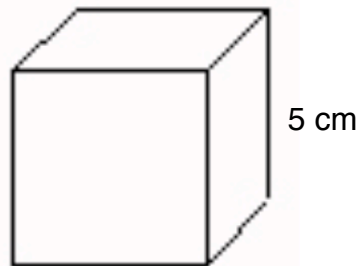
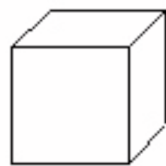
_____9. The shortest edge of the larger prism is 21 cm long. How long is the shortest edge of the smaller prism?

_____10. The base area of the larger prism is 98 cm^2 . Find the base area of the smaller prism.

_____11. The volume of the smaller prism is 135 cm^3 . Find the volume of the larger prism.

_____12. The total areas of two similar cones have the ratio 25:9. Find the ratio of the volumes.

The two right rectangular prisms below are similar.



_____13. Find the ratio of the surface areas.

_____14. Suppose the volume of the smaller prism is 8 cubic meters. Find the volume of the larger prism.

_____15. True/False: If two solids are congruent, then their volumes are equal.