

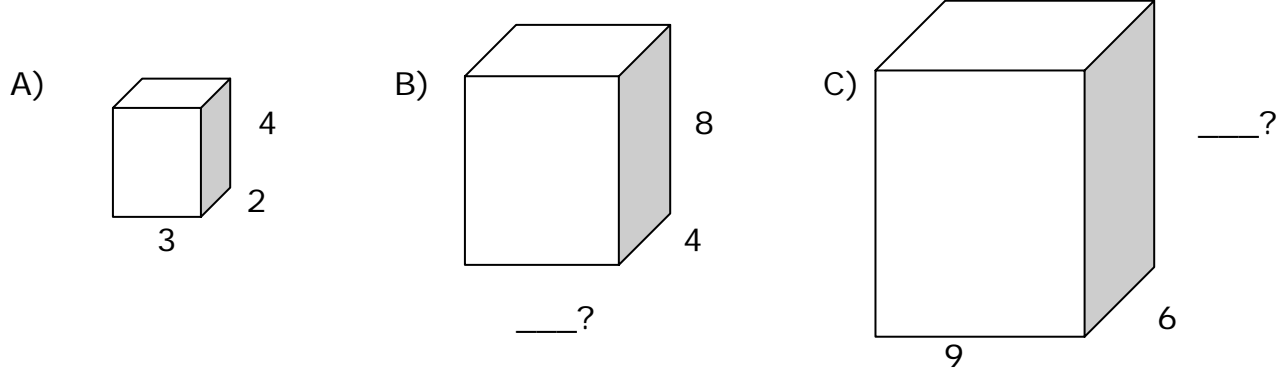
Volumes of Similar Figures

Name _____

Date _____

Each set of three figures below are similar within the set.

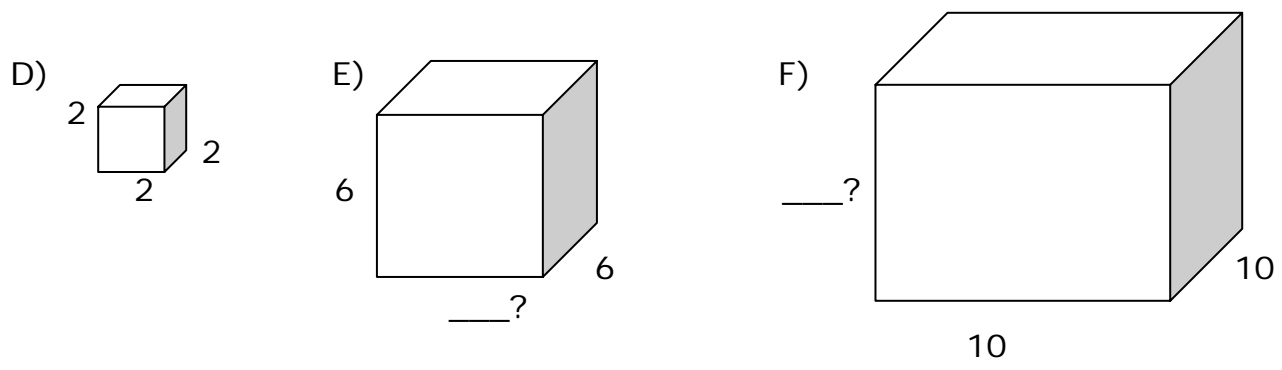
1. Fill in the blanks for the missing measurements in prism B and prism C. What is the scale factor for prism B _____? For prism C _____?



2. Find the volume for prism A, and then find the volume for Prism B and for C using the scale factor for each.

A) _____ B) _____ C) _____

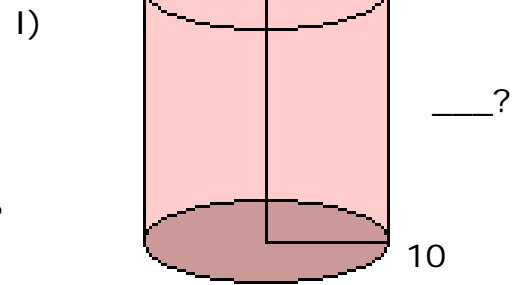
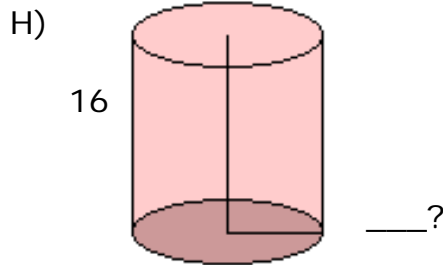
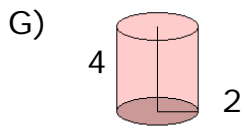
3. Fill in the blanks for the missing measurements prism E and prism F. What is the scale factor for prism E _____? For prism F _____?



4. Find the volume for prism D, and then find the volume for Prism E and for F using the scale factor for each.

D) _____ E) _____ F) _____

5. Fill in the blanks for the missing measurements for cylinder H and cylinder I. What is the scale factor for cylinder H ____? For cylinder I ____?



6. Find the volume for prism G, and then find the volume for Prism H and for I using the scale factor for each.

G)

H)

I)

K) Explain the relationship between the scale factor and the volume of two similar figures.

L) Complete the table below for the given dimensions and scale factors of the similar figures described.

Dimensions of a smaller figure	Volume of the smaller figure	Scale factor for a larger figure	Volume for larger figure
Rectangular prism: $l = 3, w = 5, h = 4$		4	
Cube: $S = 5$		3	
Cylinder: $r = 3, h = 10$		2	
Rectangular prism: $l = 8, w = 2.5, h = 4$		5	
Cube: $S = 4$		2	
Cylinder: $r = 6, h = 5$		3	