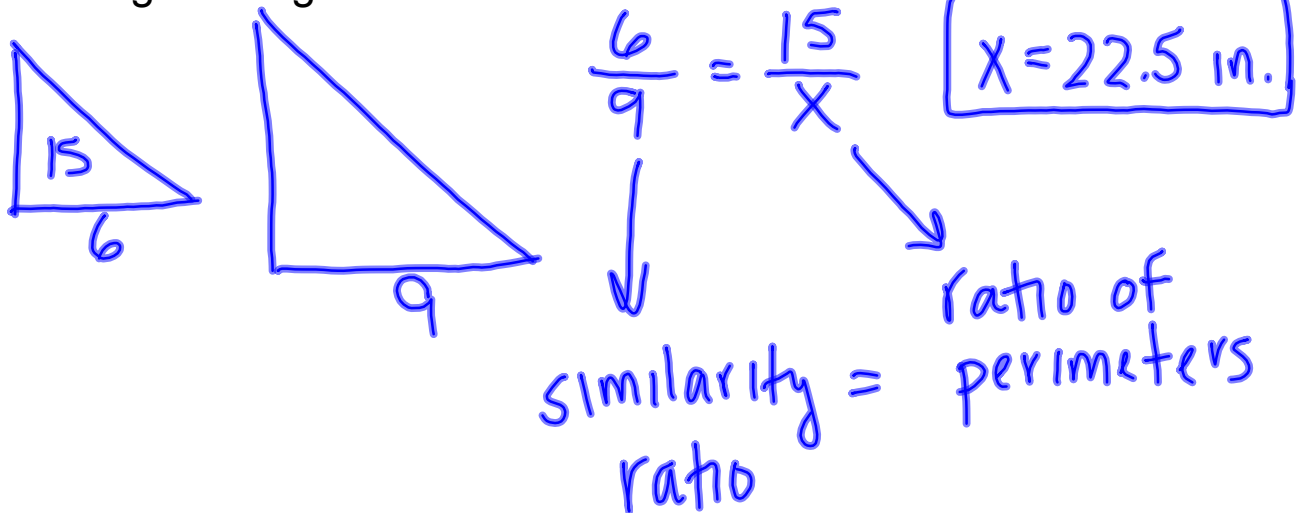
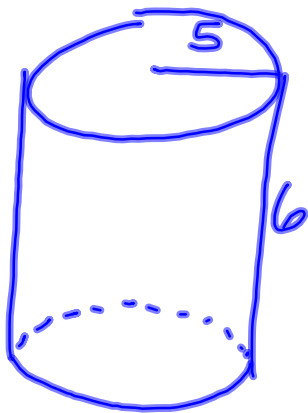


Do-now:

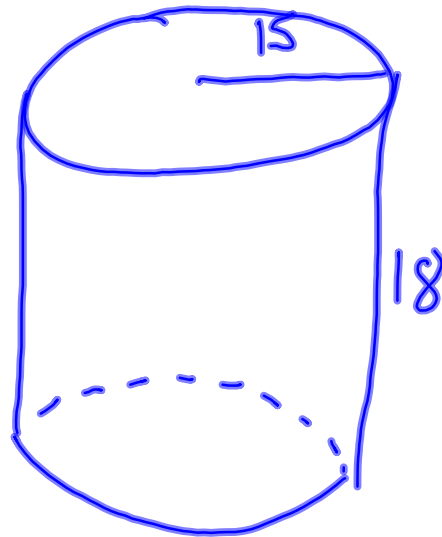
1. Turn in HW Handout #1.
2. The base of a triangle is 6 inches and its perimeter is 15 inches. The base of a similar triangle is 9 inches. What is the perimeter of the larger triangle?



Original Solid



Similar Solid



$\times 3$

$5 : 15$

\downarrow
 $1 : 3$

SIMILARITY RATIO	RATIO OF SURFACE AREAS	RATIO OF VOLUMES
1:2	1:4	1:8
1:5	1:25	1:125
1:4	1:16	1:64
1:3	1:9	1:27

Surface Areas and Volumes of Similar Solids:

If the similarity ratio of two similar figures is $a:b$, then

1) the ratio of their surface areas is $a^2:b^2$ and

2) the ratio of their volumes is $a^3:b^3$

If the similarity ratio of two similar solids is 2:7,
what is the ratio of their surface areas?

$$\frac{2^2}{7^2} = \frac{4}{49}$$

What is the ratio of their volumes?

$$\frac{2^3}{7^3} = \frac{8}{343}$$

If the ratio of the volumes of two similar solids is 64:729, what is their similarity ratio?

The volumes of two similar cylinders are 250π cubic inches and 1024π cubic inches. If the radius of the larger cylinder is 20 inches, what is the radius of the smaller cylinder?

If the ratio of the volumes of two similar solids is 8:27, what is the ratio of their surface areas?

