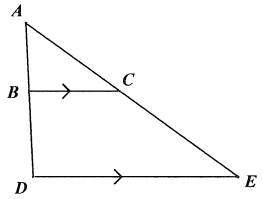
Geometry
Intro to 11.7

Name_____
Date_____ Period_____

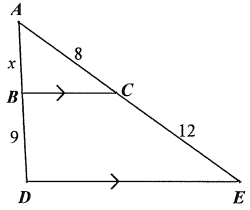
1. a. Sketch ΔABC and ΔADE separately and mark any congruent angles.



b. Which conjecture can be used to show that $\Delta ABC \sim \Delta ADE$? b. _____

Redraw the pair of similar triangles, label the sides, and write a proportion to solve for the variable.

2.



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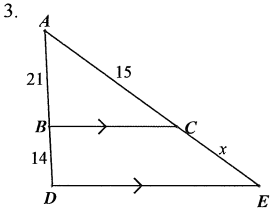

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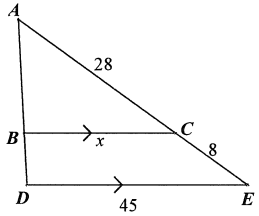


5. Using values from #2, simplify each ratio:

$\frac{AB}{BD} =$ ____ $\frac{AC}{CE} =$ ____

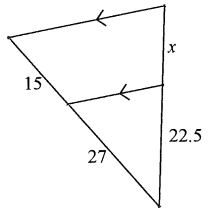
What do you notice?

6. Can you use the property found in #5 to solve #3? Show why or why not.

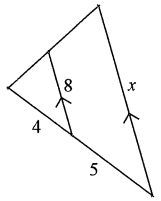
7. Can you use the property found in #5 to solve #4? Show why or why not.

Choose an appropriate proportion to solve for x.

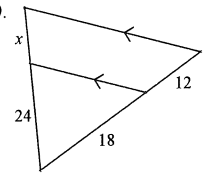
8.



9.



10.

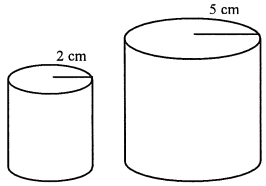


11. The following are similar cylindrical vegetable cans. Find each of the following.
a. The ratio of the sides b. The ratio of the surface areas c. The ratio of the volumes

d. If the height of the small can is 10 cm, find the height of the large can.

e. If the surface area of the large can is 100 cm^2, find the surface area of the small can.

f. If the volume of the small can is 50 cm^3, find the volume of the large can.

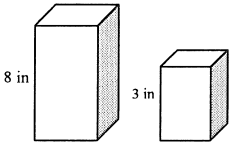


12. The following are similar rectangular packing boxes. Find each of the following.
a. The ratio of the sides b. The ratio of the surface areas c. The ratio of the volumes

d. If the large box holds 20 in^3 of packing, how much packing does the small box hold?

e. If the small box has a width of 4 in, what is the width of the large box?

f. If the small box has a top area of 80 in^2, what is the top area of the large box?



13. Two similar punch bowls have a scale factor of 3:4. The amount of lemonade to be added is proportional to the volume. How much lemonade does the smaller bowl require if the larger bowl requires 64 fluid ounces?