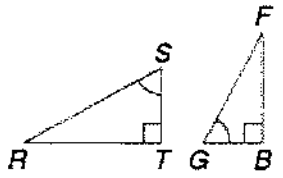
Geometry 6.3A Worksheet
Similar Triangles – Show all work!

Name _____
Per ___ Date _____

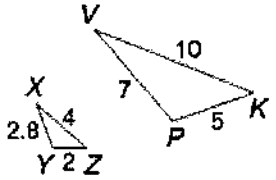
Determine if the triangles are similarity. If they are similar, complete the similarity statement, state why they are similar, and give the little to big ratio if possible.

1. $\Delta RST \sim \Delta$_____ or ≠
By _____



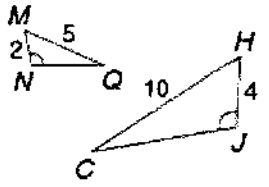
Little to Big Ratio:

2. $\Delta XYZ \sim \Delta$_____ or ≠
By _____



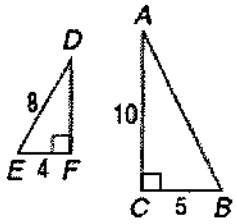
Little to Big Ratio:

3. $\Delta MNQ \sim \Delta$_____ or ≠
By _____



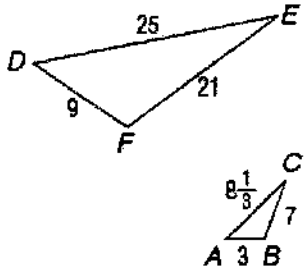
Little to Big Ratio:

4. $\Delta DEF \sim \Delta$_____ or ≠
By _____



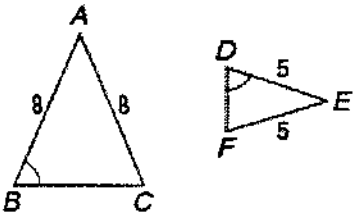
Little to Big Ratio:

5. $\Delta DEF \sim \Delta$_____ or ≠
By _____



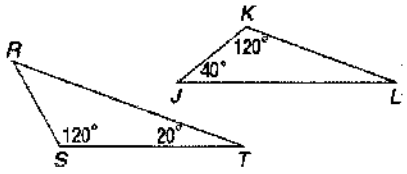
Little to Big Ratio:

6. $\Delta DEF \sim \Delta$_____ or ≠
By _____



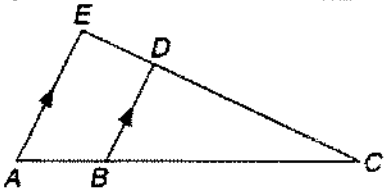
Little to Big Ratio:

7. $\Delta RST \sim \Delta$_____ or ≠
By _____



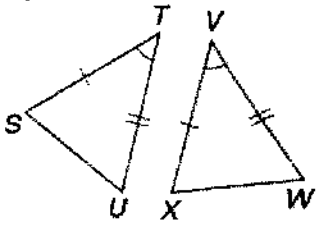
Little to Big Ratio:

8. $\Delta ABC \sim \Delta$_____ or ≠
By _____



Little to Big Ratio:

9. $\Delta ABC \sim \Delta$_____ or ≠
By _____



Little to Big Ratio:

10.

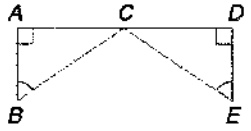
Alicia	Jason
$\frac{r}{k} = \frac{s}{m}$	$\frac{r}{k} = \frac{m}{s}$
$rm = ks$	$rs = km$

Who is correct? Explain your reasoning.

Fill in each proof:

11. Given: $\angle B \cong \angle E$, $\angle A$ and $\angle D$ are right angles

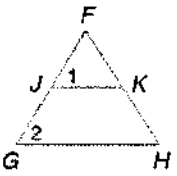
Prove: $\frac{BC}{EC} = \frac{AB}{DE}$



a. $\angle B \cong \angle E$	
b. $\angle A$ and $\angle D$ are right angles.	
c. $\angle A \cong \angle D$	
d. $\triangle ABC \sim \triangle DEC$	
e. $\frac{BC}{EC} = \frac{AB}{DE}$	

12. Given: $\overline{JK} \parallel \overline{GH}$

Prove: $\frac{FJ}{FG} = \frac{FK}{FH}$



a. $\overline{JK} \parallel \overline{GH}$	
b. $\angle 1 \cong \angle 2$	
c. $\angle F \cong \angle F$	
d. $\triangle FJK \sim \triangle FGH$	
e. $\frac{FJ}{FG} = \frac{FK}{FH}$	

13. A lighthouse casts a 128-foot shadow. A nearby lamppost that measures 5 feet 3 inches casts an 8-foot shadow.

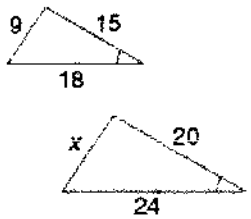
A. 5 feet 3 inches is 5._____ feet.

B. Write a proportion that can be used to determine the height of the lighthouse.

C. What is the height of the lighthouse?

Find the little to big ratio, set up a proportion, and solve for each variable.

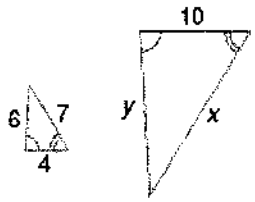
14. Little to big ratio:



Proportion to solve for x:

x = _____

15. Little to big ratio:



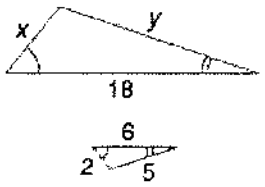
Proportion to solve for x:

x = _____

Proportion to solve for y:

y = _____

16. Little to big ratio:



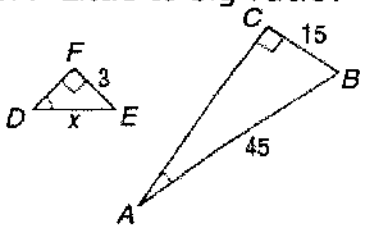
Proportion to solve for x:

x = _____

Proportion to solve for y:

y = _____

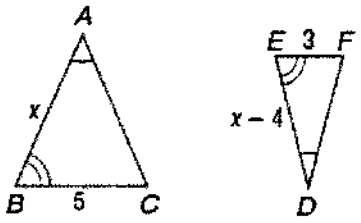
17. Little to big ratio:



Proportion to solve for x:

x = _____

18. Little to big ratio:

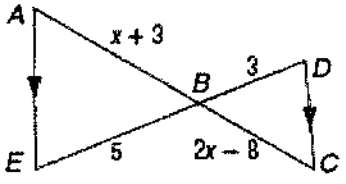


Proportion to solve for x:

x = _____

ED = _____

19. Little to big ratio:



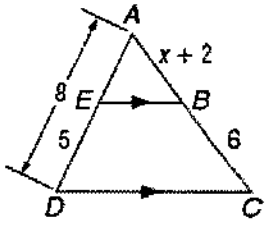
Proportion to solve for x:

x = _____

BC = _____

AB = _____

20. Little to big ratio:

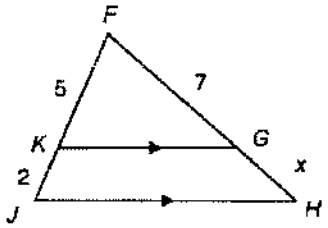


Proportion to solve for x:

x = _____

AB = _____

21. Little to big ratio:

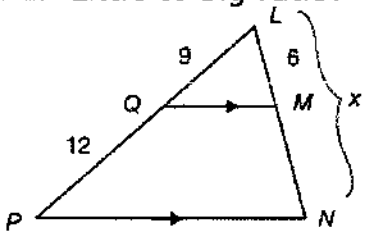


Proportion to solve for x:

x = _____

FH = _____

22. Little to big ratio:

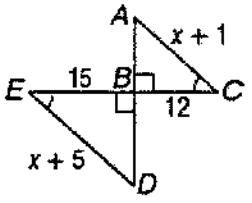


Proportion to solve for x:

x = _____

MN = _____

23. Little to big ratio:



Proportion to solve for x:

x = _____

AC = _____

24. Little to big ratio:

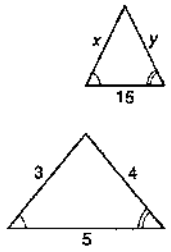
Proportion to solve for x:

x = _____

Proportion to solve for y:

y = _____

25. Little to big ratio:



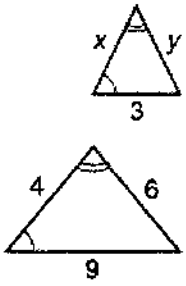
Proportion to solve for x:

x = _____

Proportion to solve for y:

y = _____

26. Little to big ratio:



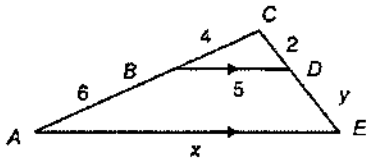
Proportion to solve for x:

x = _____

Proportion to solve for y:

y = _____

27. Little to big ratio:



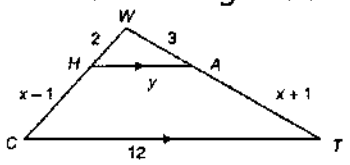
Proportion to solve for x:

x = _____

Proportion to solve for y:

y = _____

28. Little to big ratio:



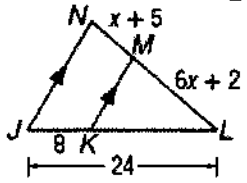
Proportion to solve for x:

x = _____

Proportion to solve for y:

y = _____

29. Little to big ratio:



Proportion to solve for x:

x = _____

NM = _____

ML = _____