

7.4 Congruence and Similarity Criteria

NAME: Key AHS

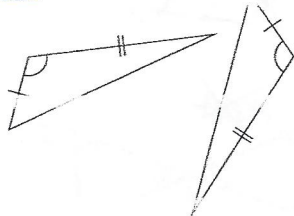
Congruence Criteria

cannot use SSA, AAA

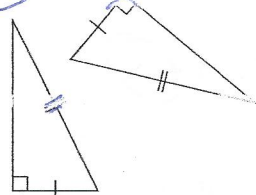
Are the following pairs of triangles congruent? If they are, then name their congruence criteria.

(SSS, SAS, ASA, AAS, HL or AS_1S_2 ($S_1 \neq S_2$))

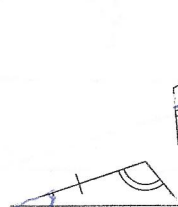
1. Yes/No SAS



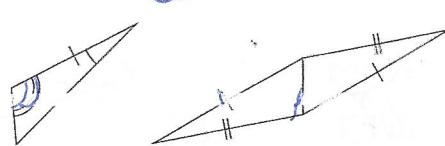
2. Yes/No HL



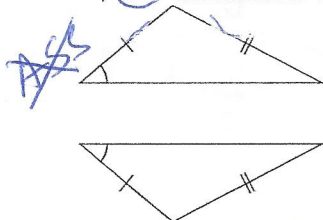
3. Yes/No ASA



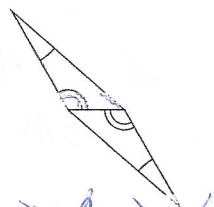
4. Yes/No SSS



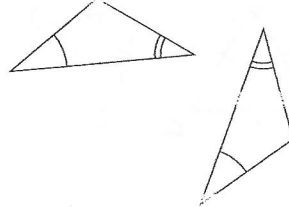
5. Yes/No SSS



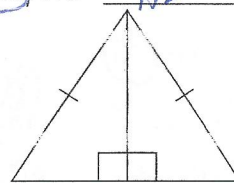
6. Yes/No AAS



7. Yes/No SSS



8. Yes/No HL

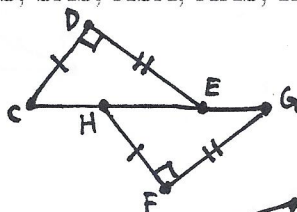


Are the following pairs of triangles congruent? If Yes, create a congruence statement and name the congruence criteria. (SSS, SAS, ASA, AAS, HL or AS_1S_2 ($S_1 \neq S_2$))

9. Yes/No

$$\triangle CDE \cong \triangle HFG$$

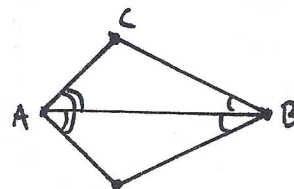
Criteria SAS



10. Yes/No

$$\triangle ___ \cong \triangle ___$$

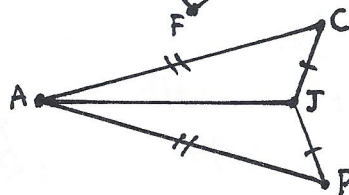
Criteria ASA



11. Yes/No

$$\triangle IAC \cong \triangle JAP$$

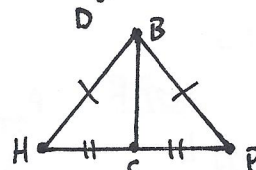
Criteria SSS



12. Yes/No

$$\triangle CHB \cong \triangle CPB$$

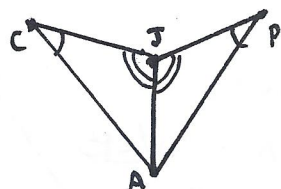
Criteria SSS



13. Yes/No

$$\triangle AJC \cong \triangle AJP$$

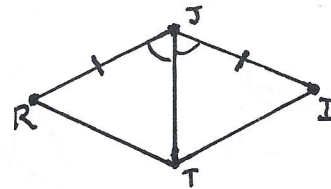
Criteria AAS



14. Yes/No

$$\triangle RTJ \cong \triangle ITJ$$

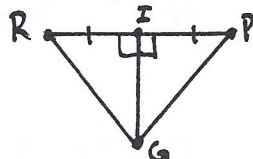
Criteria SAS



15. Yes/No

$$\triangle ___ \cong \triangle ___$$

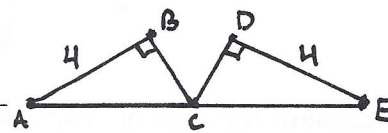
Criteria SSS



16. Yes/No

$$\triangle ___ \cong \triangle ___$$

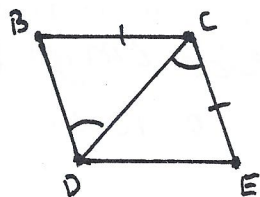
Criteria SSS



17. Yes/No

$$\triangle ___ \cong \triangle ___$$

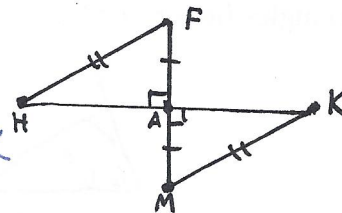
Criteria SSS



18. Yes/No

$$\triangle AHF \cong \triangle AMK$$

Criteria HL



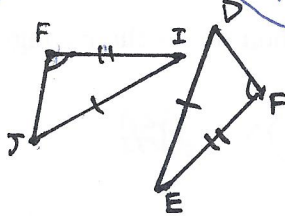
cannot use SSA/AAA

Are the following pairs of triangles congruent? If Yes, create a congruence statement and name the congruence criteria. (SSS, SAS, ASA, AAS, HL or AS_1S_2 ($S_1 < S_2$))

19. Yes/No

$\triangle \text{ } \cong \triangle \text{ }$

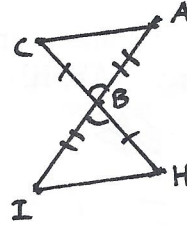
Criteria



20. Yes/No

$\triangle \text{BA} \cong \triangle \text{HBI}$

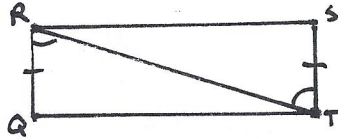
Criteria



21. Yes/No

$\triangle \text{QFT} \cong \triangle \text{STR}$

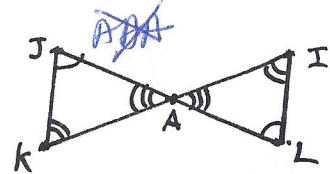
Criteria



22. Yes/No

$\triangle \text{ } \cong \triangle \text{ }$

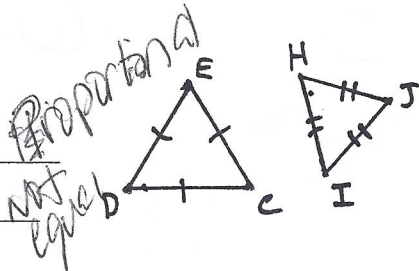
Criteria



23. Yes/No

$\triangle \text{ } \cong \triangle \text{ }$

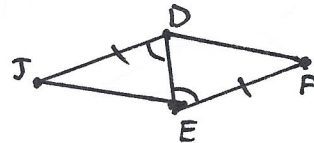
Criteria



24. Yes/No

$\triangle \text{JDE} \cong \triangle \text{FED}$

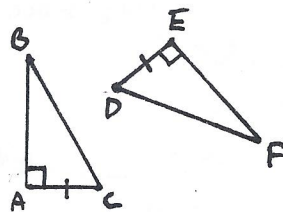
Criteria



25. Yes/No

$\triangle \text{ } \cong \triangle \text{ }$

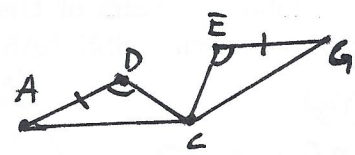
Criteria



26. Yes/No

$\triangle \text{ } \cong \triangle \text{ }$

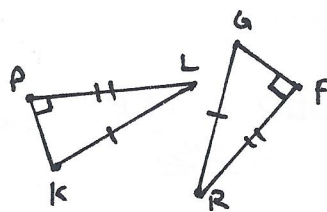
Criteria



27. Yes/No

$\triangle \text{KPL} \cong \triangle \text{GFR}$

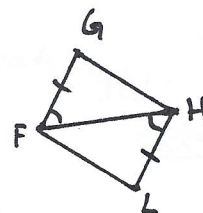
Criteria



28. Yes/No

$\triangle \text{GFH} \cong \triangle \text{LHF}$

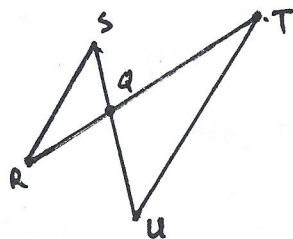
Criteria



29. Yes/No

$\triangle \text{ } \cong \triangle \text{ }$

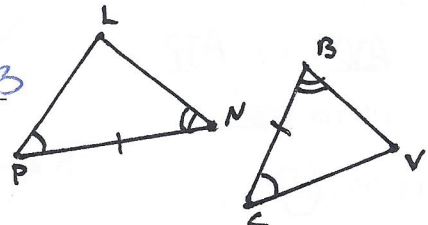
Criteria



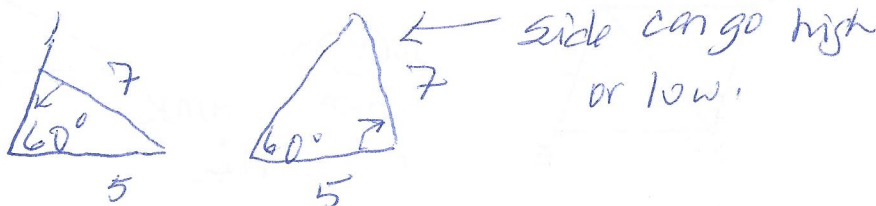
30. Yes/No

$\triangle \text{LPN} \cong \triangle \text{VCB}$

Criteria



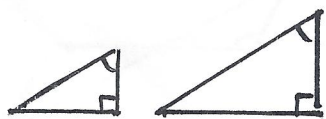
31. Explain the case of AS_1S_2 when S_2 is less than S_1 , where it has two intersections. Why can two triangles be formed? (you can draw a picture to accompany your explanation)



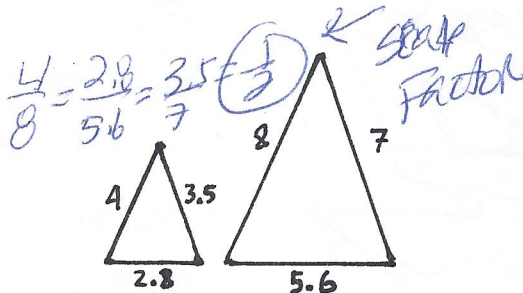
Angles $\cong$, sides proportional

Are the following triangles similar? If they are, name the similarity criteria (SSS, SAS, AA)

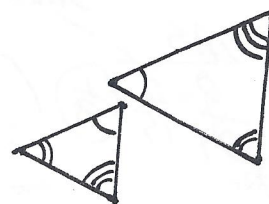
49. Yes/No AA



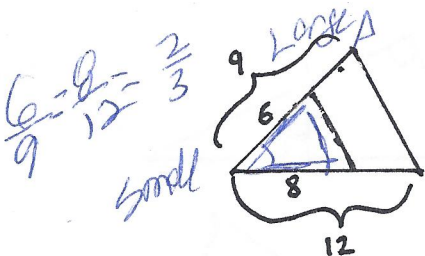
50. Yes/No SSS



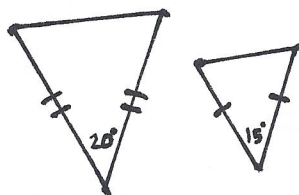
51. Yes/No AA



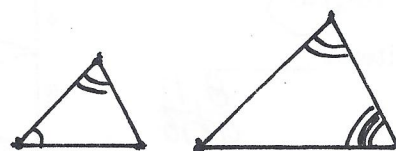
52. Yes/No SAS



53. Yes/No



54. Yes/No AA

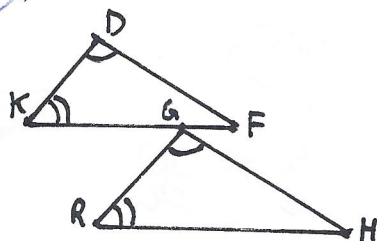


Are the following pairs of triangles similar? If Yes, create a similarity statement and name the similarity criteria. (SSS, SAS, AA)

55. Yes/No

$\triangle FDK \sim \triangle HGR$

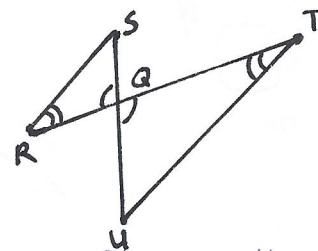
Criteria AA



56. Yes/No

$\triangle PQS \sim \triangle TQR$

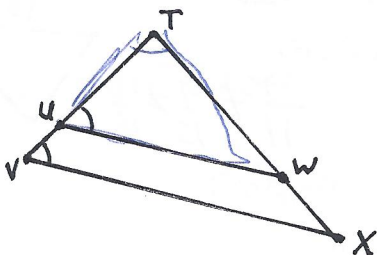
Criteria AA



57. Yes/No

$\triangle WUT \sim \triangle XVT$

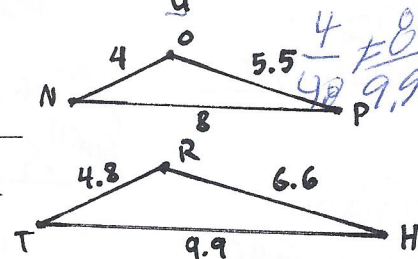
Criteria AA



58. Yes/No

$\triangle \sim \triangle$

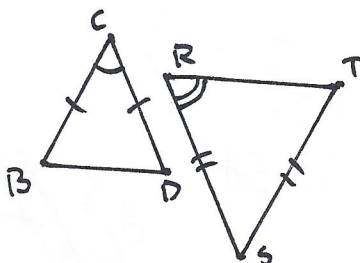
Criteria



59. Yes/No

$\triangle \sim \triangle$

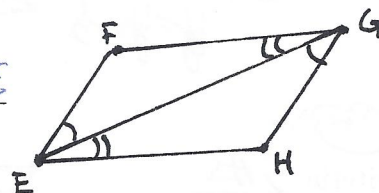
Criteria



60. Yes/No

$\triangle FGE \sim \triangle GHE$

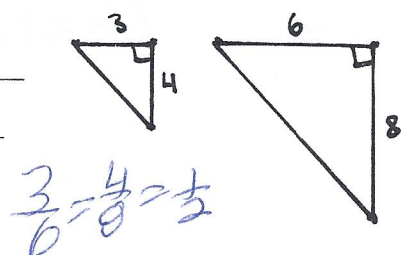
Criteria AA



61. Yes/No

$\triangle \sim \triangle$

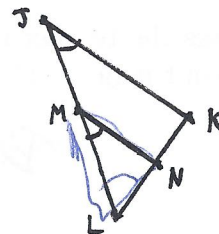
Criteria SAS



62. Yes/No

$\triangle LMN \sim \triangle LJK$

Criteria AA



Similarity Criteria

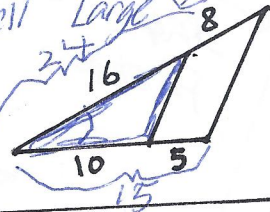
Angles $\cong$, Sides Proportional

Are the following triangles similar? If YES, name the similarity criteria (SSS, SAS, AA)

32. Yes/No

Criteria

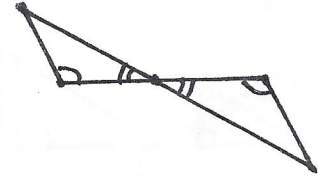
SAS
 $\frac{8}{24} = \frac{5}{15} = \frac{1}{3}$



33. Yes/No

Criteria

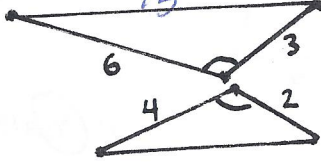
AA



34. Yes/No

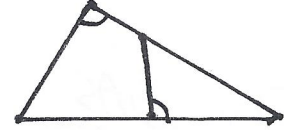
Criteria

SAS
 $\frac{2}{3} = \frac{4}{6}$



35. Yes/No

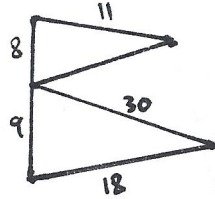
Criteria



36. Yes/No

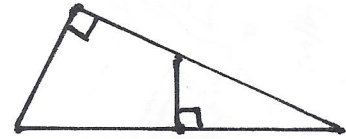
Criteria

$\frac{8}{9} \neq \frac{11}{18}$



37. Yes/No

Criteria



38. Yes/No

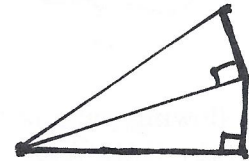
Criteria

$\frac{6}{9} \neq \frac{11}{8}$



39. Yes/No

Criteria



40. Yes/No

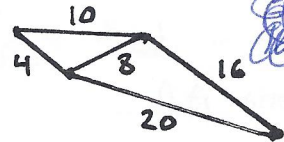
Criteria



41. Yes/No

Criteria

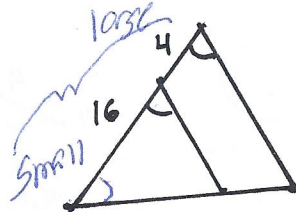
$\frac{4}{16} \neq \frac{10}{20}$



42. Yes/No

Criteria

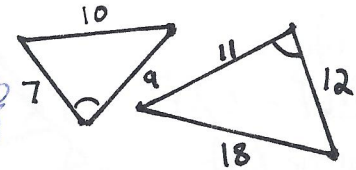
AA



43. Yes/No

Criteria

$\frac{7}{11} \neq \frac{9}{12} \neq \frac{10}{18}$

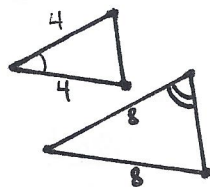


44. Yes/No

Criteria

SAS

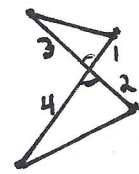
$\frac{4}{8} = \frac{4}{8} = \frac{1}{2}$



45. Yes/No

Criteria

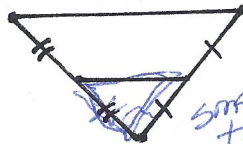
$\frac{3}{3} \neq \frac{1}{4}$



46. Yes/No

Criteria

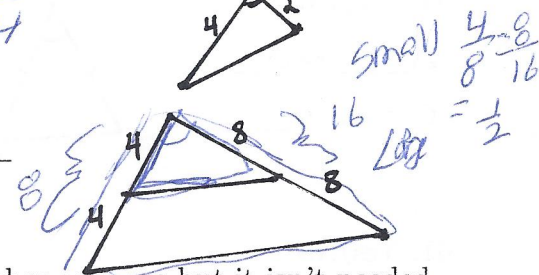
SAS



47. Yes/No

Criteria

SAS



48. Jeff asks the teacher if ASA is also a similarity criterion. The teacher says yes but it isn't needed.

Why isn't it needed?

Because there is AA.