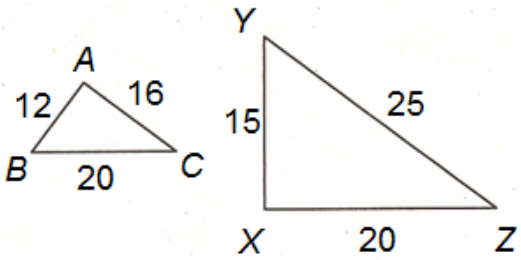
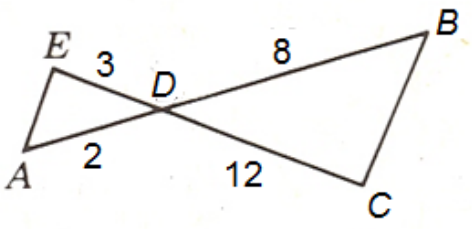
Name _____ Date _____ Period _____

DIRECTIONS: For #1-6, if the triangles are similar, **write an accurate similarity statement** for the two similar triangles shown ($\Delta UVW \sim \Delta XYZ$, for example) and circle the correct similarity postulate/theorem (**AA**, **SSS**, or **SAS**) that justifies your answer. If the triangles are not similar, write **"none"** in the blank and circle **Not** $\sim$.



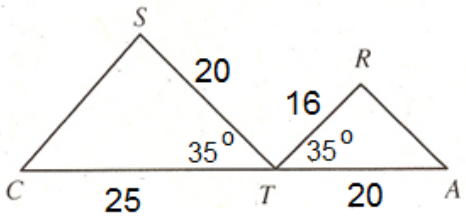
1. _____

AA **SSS** **SAS** **Not** $\sim$



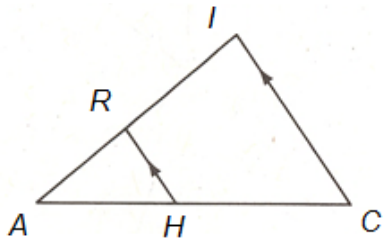
2. _____

AA **SSS** **SAS** **Not** $\sim$



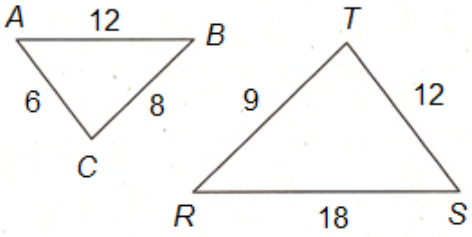
3. _____

AA **SSS** **SAS** **Not** $\sim$



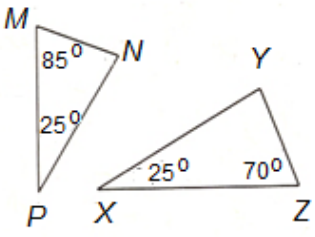
4. _____

AA **SSS** **SAS** **Not** $\sim$



5. _____

AA **SSS** **SAS** **Not** $\sim$



6. _____

AA **SSS** **SAS** **Not** $\sim$

DIRECTIONS: For #7-9, the lengths of the sides of ΔABC and ΔDEF are given. Circle **YES** or **NO** and answer the questions in the provided blanks.

7. $AB = 10$, $BC = 15$, $AC = 20$; $DE = 16$, $EF = 24$, $DF = 32$

a. Are these triangles similar (circle exactly one)? **YES** **NO**

b. If YES for 7a, what is the scale factor (if NO for 7a, write "none")? _____

c. If YES for 7a, complete the following similarity statement (if NO for 7a, write "none")? $\Delta ABC \sim \Delta$ _____

8. $AB = 7$, $BC = 10$, $AC = 12$; $DE = 24$, $EF = 20$, $DF = 15$

a. Are these triangles similar (circle exactly one)? **YES** **NO**

b. If YES for 8a, what is the scale factor (if NO for 8a, write "none")? _____

c. If YES for 8a, complete the following similarity statement (if NO for 8a, write "none")? $\Delta ABC \sim \Delta$ _____

9. $AB = 8$, $BC = 9$, $AC = 10$; $DE = 15$, $EF = 12$, $DF = 13.5$

a. Are these triangles similar (circle exactly one)? **YES** **NO**

b. If YES for 9a, what is the scale factor (if NO for 9a, write "none")? _____

c. If YES for 9a, complete the following similarity statement (if NO for 9a, write "none")? $\Delta ABC \sim \Delta$ _____

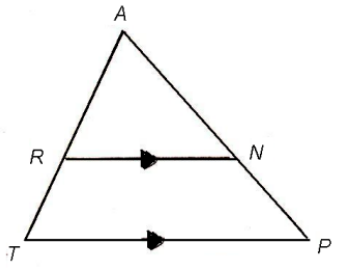
DIRECTIONS: For #10, complete the given chart. Show all work, especially proportions.

10.

AR	*RT*	*AT*
	10	40

AN	*NP*	*AP*
		36

RN	*TP*
24	



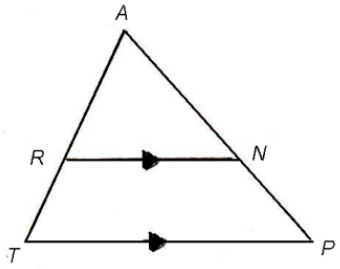
DIRECTIONS: For #11, complete the given chart. Show all work, especially proportions.

11.

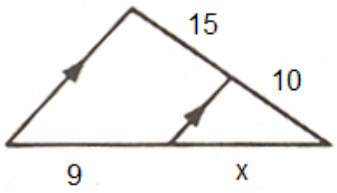
AR	*RT*	*AT*
12		

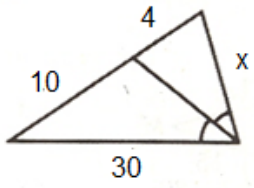
AN	*NP*	*AP*
	2	

RN	*TP*
16	20



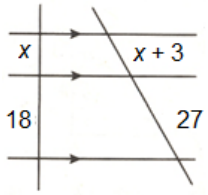
DIRECTIONS: For #12-19, find the value of x. Show all work, especially proportions.



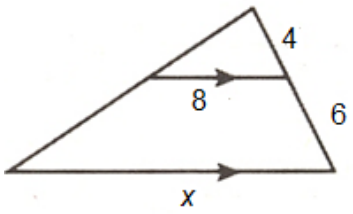


12. $x =$ _____

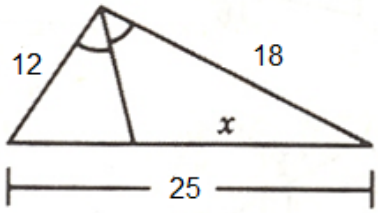
13. $x =$ _____



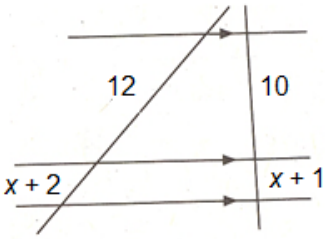
14. x = _____



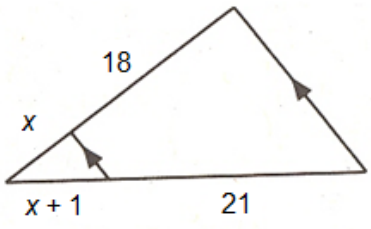
15. x = _____



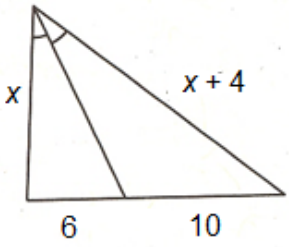
16. x = _____



17. x = _____



18. x = _____



19. x = _____

Expect one problem like Worksheet 7.5