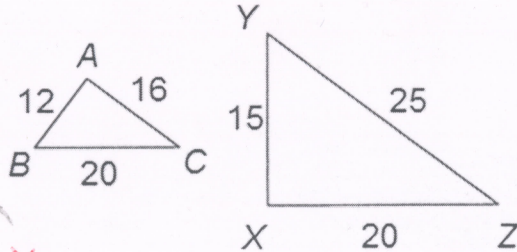


Name KEY Date _____ Period _____

DIRECTIONS: For #1-6, if the triangles are similar, write an accurate similarity statement for the two similar triangles shown ($\triangle UVW \sim \triangle XYZ$, 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 ~.

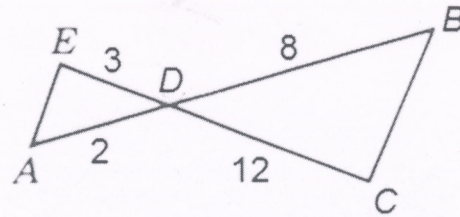
There are lots of ways to write correct similarity - pay attention to how letters match up



*A goes with X
B goes with Y
C goes with Z*

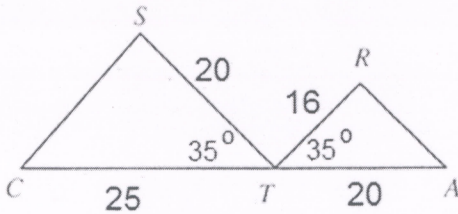
1. $\triangle ABC \sim \triangle XYZ$

AA SSS SAS Not ~



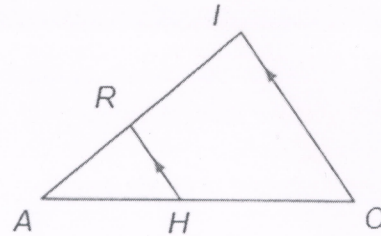
2. $\triangle ADE \sim \triangle BDC$

AA SSS SAS Not ~



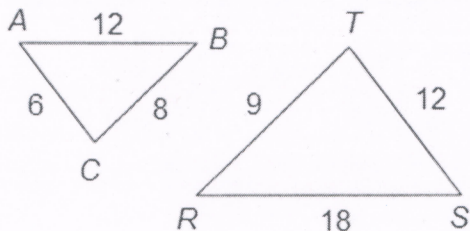
3. $\triangle CST \sim \triangle ART$

AA SSS SAS Not ~



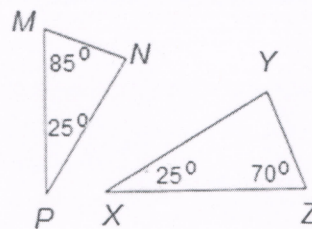
4. $\triangle ARH \sim \triangle AIC$

AA SSS SAS Not ~



5. $\triangle ABC \sim \triangle RST$

AA SSS SAS Not ~



6. $\triangle PMN \sim \triangle XYZ$

AA SSS SAS Not ~

DIRECTIONS: For #7-9, the lengths of the sides of $\triangle ABC$ and $\triangle DEF$ are given. Circle YES or NO and answer the questions in the provided blanks.

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

- Are these triangles similar (circle exactly one)?
- If YES for 7a, what is the scale factor (if NO for 7a, write "none")?
- If YES for 7a, complete the following similarity statement (if NO for 7a, write "none")?

$\triangle ABC \sim \triangle$ DEF

YES NO

5/8 or 5:8

↓
or
8/5
or
8:5

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

- Are these triangles similar (circle exactly one)?
- If YES for 8a, what is the scale factor (if NO for 8a, write "none")?
- If YES for 8a, complete the following similarity statement (if NO for 8a, write "none")?

$\triangle ABC \sim \triangle$ NONE

YES NO

NONE

9. $AB = 8$, $BC = 9$, $AC = 10$; $DE = 15$, $EF = 20$, $DF = 13.5$

- Are these triangles similar (circle exactly one)?
- If YES for 9a, what is the scale factor (if NO for 9a, write "none")?
- If YES for 9a, complete the following similarity statement (if NO for 9a, write "none")?

$\triangle ABC \sim \triangle$ NONE

YES NO

NONE

Sorry - I meant to make

~~EF~~ $EF = 12$...

then something happens!

If your version has $EF = 12$,

then a) Yes b) $\frac{2}{3}$ or $\frac{3}{2}$ c) $\triangle ABC \sim \triangle EFD$
2:3 3:2

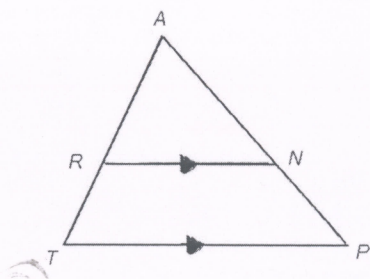
DIRECTIONS: For #10, complete the given chart. Show all work, especially proportions.

10.

AR	RT	AT
30	10	40

AN	NP	AP
27	9	36

RN	TP
24	32



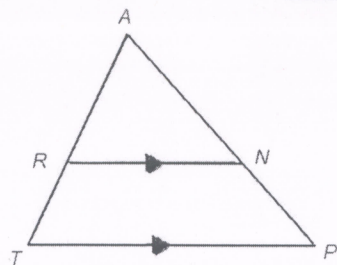
DIRECTIONS: For #11, complete the given chart. Show all work, especially proportions.

11.

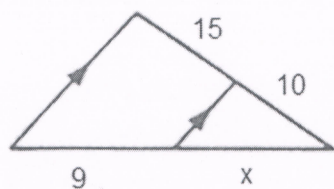
AR	RT	AT
12	3	15

AN	NP	AP
8	2	10

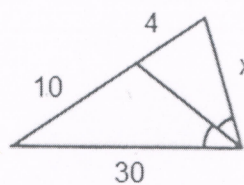
RN	TP
16	20



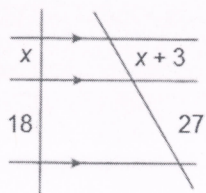
DIRECTIONS: For #12-19, find the value of x . Show all work, especially proportions.



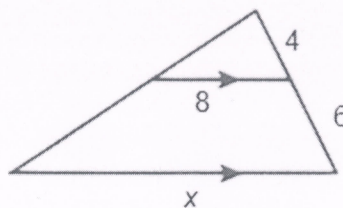
12. $x =$ 6



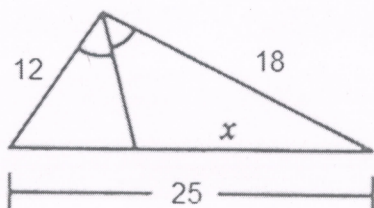
13. $x =$ 12



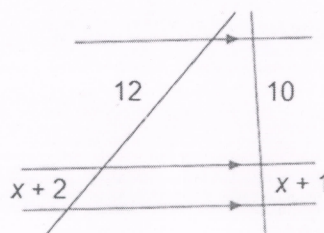
14. $x =$ 6



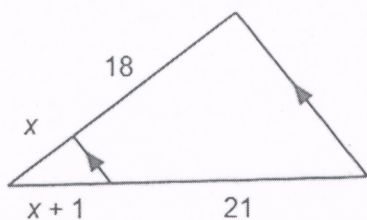
15. $x =$ 20



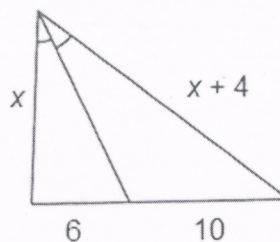
16. $x =$ 15



17. $x =$ 4



18. $x =$ 6



19. $x =$ 6

(Sorry - picture doesn't look anything close to answer!)