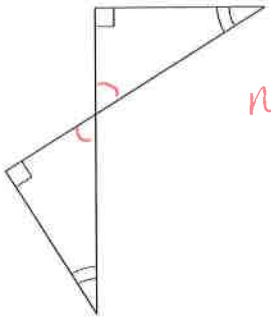
Mrs.Fucsko - Geometry

Name Key

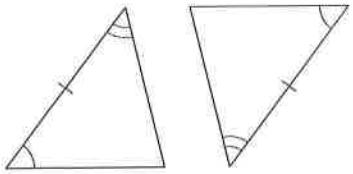
Review - Chapter 4

Date _____ Block ____

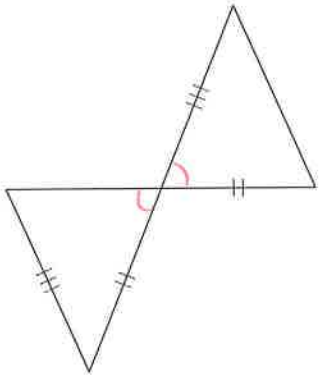
State if the two triangles are congruent. If they are, state how you know.

1) 

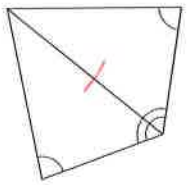
not congruent
AAA

2) 

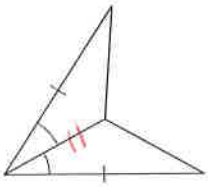
congruent
ASA

3) 

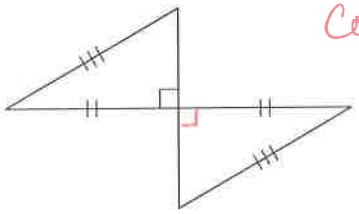
not congruent
trickery

4) 

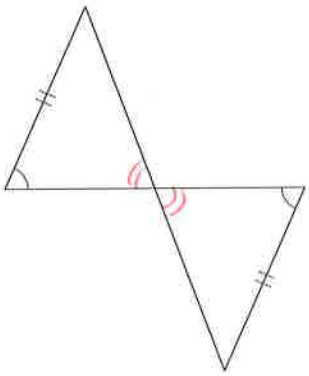
congruent
AAS

5) 

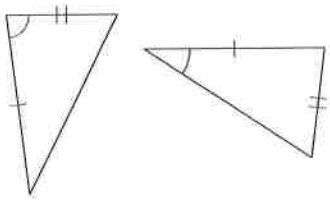
Congruent
SAS

6) 

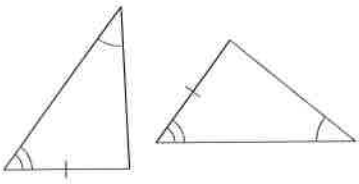
Congruent
HL

7) 

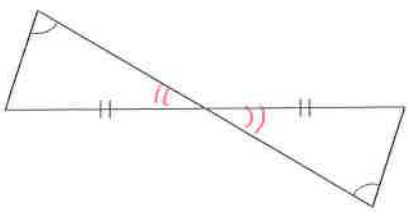
Congruent
AAS

8) 

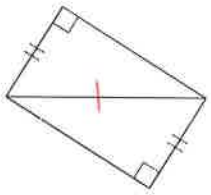
not congruent
trickery

9) 

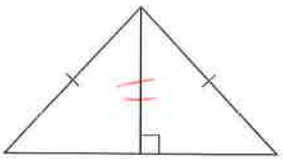
Congruent
AAS

10) 

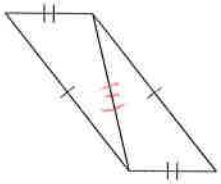
Congruent
AAS

11) 

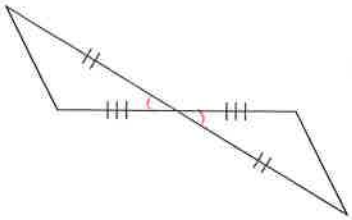
Congruent
HL

12) 

Congruent
HL

13) 

Congruent
SSS

14) 

Congruent
SAS

Complete each congruence statement by naming the corresponding angle or side.

15) $\Delta ACB \cong \Delta CAW$

$\angle B \cong ?$ $\angle W$

16) $\Delta ABC \cong \Delta JKC$

$\overline{AB} \cong ?$ $\overline{JK}$

17) $\Delta JHI \cong \Delta HJS$

$\overline{HI} \cong ?$ $\overline{JS}$

18) $\Delta KJI \cong \Delta BCI$

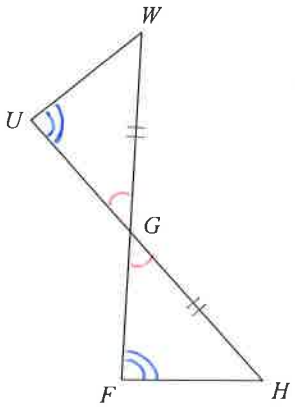
$\angle K \cong ?$ $\angle B$

State what additional information is required in order to know that the triangles are congruent for the reason given.

red = always allowed to mark

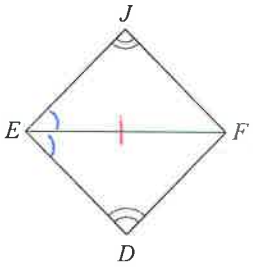
blue = new information needed

19) AAS



$\angle WUG \cong \angle GFH$

20) AAS

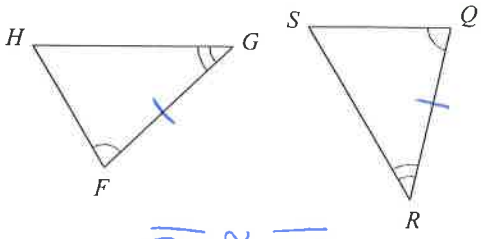


$\angle JEF \cong \angle FED$

OR

$\angle JFE \cong \angle DFE$

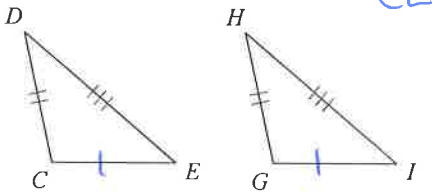
21) ASA



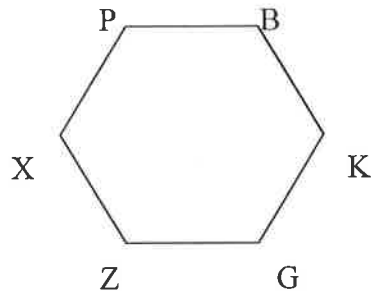
$\overline{FG} \cong \overline{QR}$

22) SSS

$\overline{CE} \cong \overline{GI}$



29. List two ways that you can properly name the hexagon.



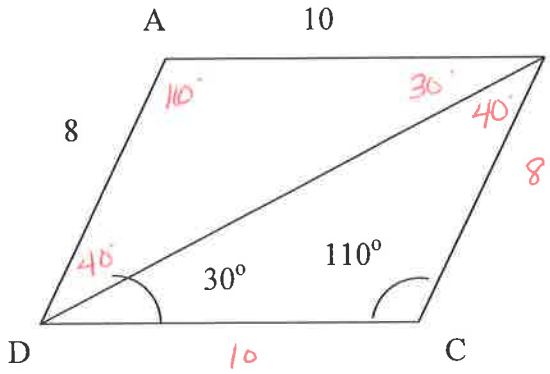
hexagon PBKGZX

hexagon BKGZXP

30. If triangle ABC is congruent to triangle XYZ, then < A is congruent to < X.

What statement / postulate allows this to be true? CPCTC

31. Find the requested measurements for the parallelogram.



< DBC = 40°

< BDA = 40°

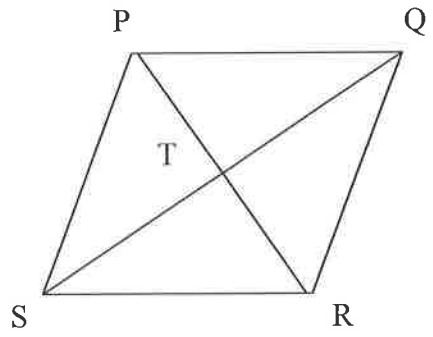
< A = 110°

< ADC = 70°

DC = 10

BC = 8

32. List all of the congruent segments for rhombus PQRS.



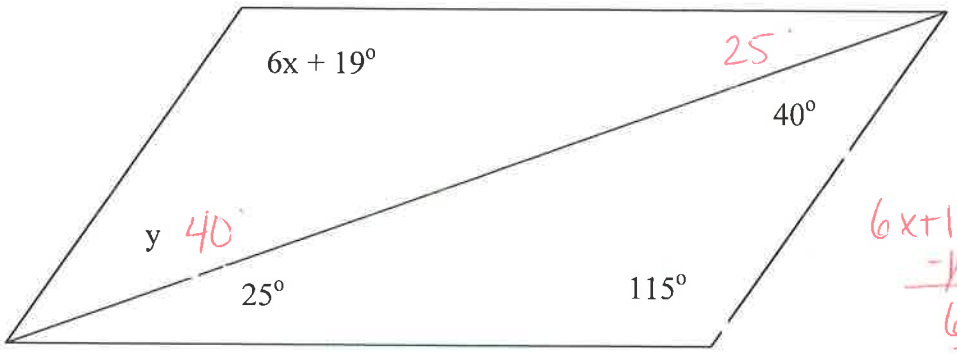
Congruent to PT:

$\overline{TR}$

Congruent to PQ:

$\overline{QR}$, $\overline{RS}$, $\overline{SP}$

34. Given the below picture, solve for x and y

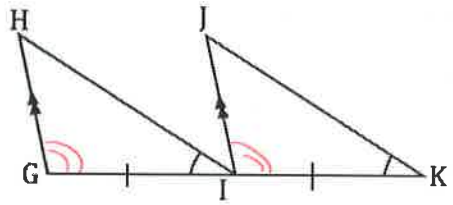


$6x+19=115$
$-19\ \ -19$
$6x=96$
$\frac{6x}{6}=\frac{96}{6}$
$x=16$

x = 16 y = 40

35.

Given: $\overline{HG}\parallel\overline{JI}$, $\overline{GI}\cong\overline{IK}$, and $\angle HIG\cong\angle JKI$

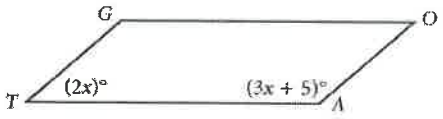


Prove: $\angle C\cong\angle F$
$\angle H\cong\angle J$

Statements	Reasons
$\overline{HG}\parallel\overline{JI}$	given
$\overline{GI}\cong\overline{IK}$	given
$\angle HIG\cong\angle JKI$	given
$\angle HGI\cong\angle JIK$	corresponding
$\triangle HGI\cong\triangle JIK$	ASA
$\angle H\cong\angle J$	CPCTC

1. ***Multiple Choice*** Find the value of x for parallelogram $GOAT$.

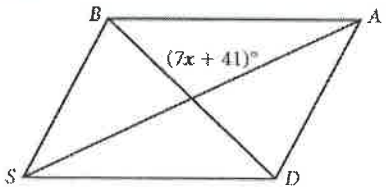
$2x+3x+15=180$
$5x+5=180$
$-5\ \ -5$
$\frac{5x}{5}=\frac{175}{5}$
$x=35$



Ⓐ 70° Ⓑ 35°
Ⓒ 110° Ⓓ 25°

2. ***Multiple Choice*** If $SBAD$ is a rhombus, what is the value of x?

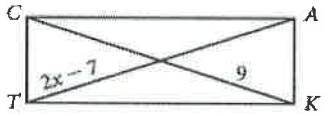
$7x+41=90$
$-41\ \ -41$
$\frac{7x}{7}=\frac{49}{7}$
$x=7$



Ⓐ 10 Ⓑ 5
Ⓒ 6 Ⓓ 7

3. ***Multiple Choice*** $TCAK$ is a rectangle. Solve for x.

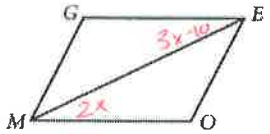
$2x-7=9$
$+7\ \ +7$
$\frac{2x}{2}=\frac{16}{2}$
$x=8$



Ⓐ 8 Ⓑ 7
Ⓒ 9 Ⓓ 4

4. ***Multiple Choice*** For parallelogram $GEOM$ if $m\angle GEM = 3x - 10$ and $m\angle EMO = 2x$, what is x?

$2x=3x-10$
$-3x\ \ -3x$
$\frac{-x}{-1}=\frac{-10}{-1}$
$x=10$



Ⓐ 12 Ⓑ 12
Ⓒ 10 Ⓓ 21