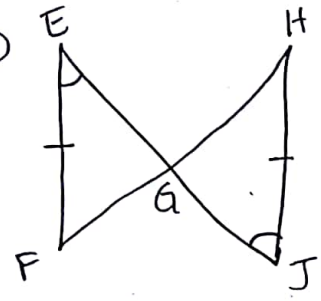
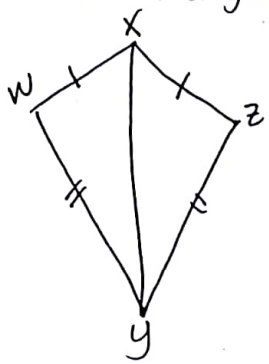
Name _____

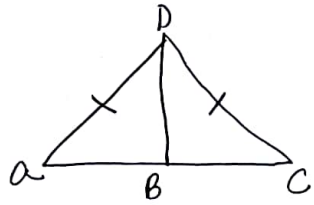
Date _____ Period _____

Geometry
Ch. 4/5 Review

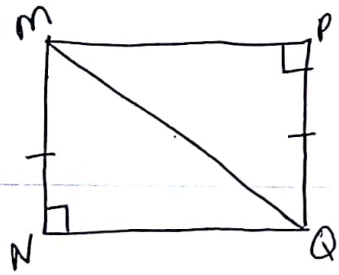
Decide whether it is possible to prove the triangles are ≅. If possible, state the postulate that makes them ≅. Write a congruency statement if the triangles are ≅.

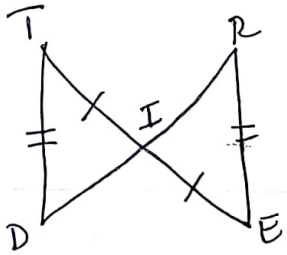
① 

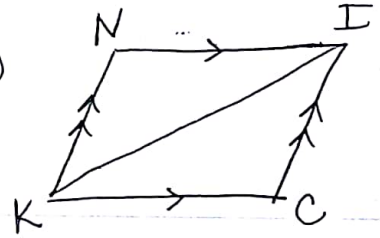
② 

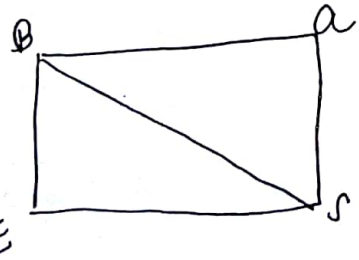
③ 

given: $\overline{BD}$ bisects $\angle ADC$

④ 

⑤ 

⑥ 

⑦ 

given: $\overline{Ba} \cong \overline{SE}$
$\overline{Ba} \parallel \overline{SE}$

prove: $\triangle ESB \cong \triangle aBS$

statements	reasons

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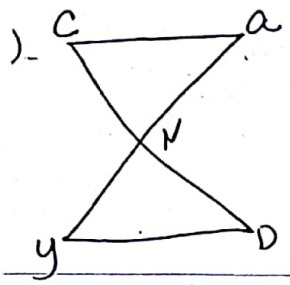

iven: $\overline{CA} \| \overline{DY}$

N is midpt of $\overline{CD}$

ove: $\triangle CAN \cong \triangle DYN$

statements	Reason
① $\overline{CA} \| \overline{DY}$	①
②	②
③	③ given
④	④
⑤ $\angle CNA \cong$ ___	⑤
⑥ $\triangle CAN \cong \triangle DYN$	⑥

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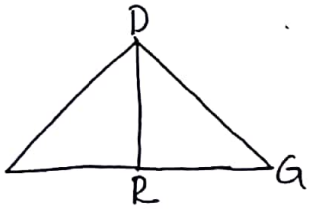

iven: $\overline{RA} \cong \overline{RG}$

$\angle ARD$ and $\angle GRD$ are right $\angle$'s

ove: $\triangle ARD \cong \triangle GRD$

statements	Reasons
①	①
② $\angle ARD$ and $\angle GRD$ are right $\angle$'s	②
③	③ all right $\angle$'s are $\cong$
④	④
⑤	⑤

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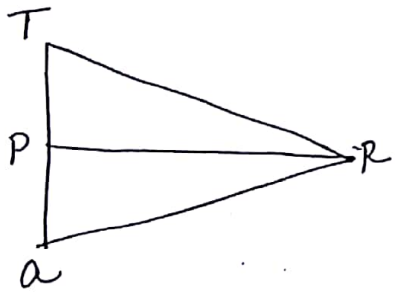


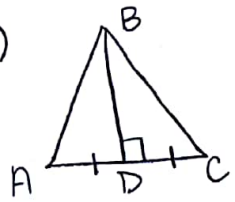
ven: $\overline{TR} \cong \overline{AR}$

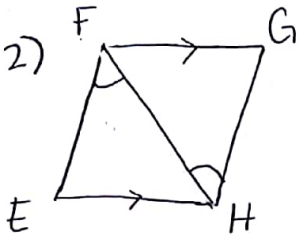
P is midpt of $\overline{TA}$

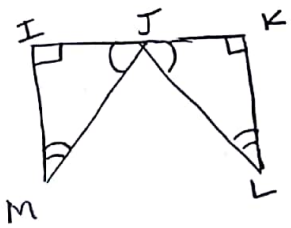
ve: $\triangle TRP \cong \triangle ARP$

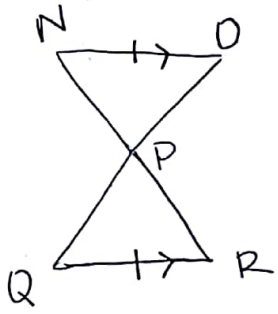
statements	Reasons

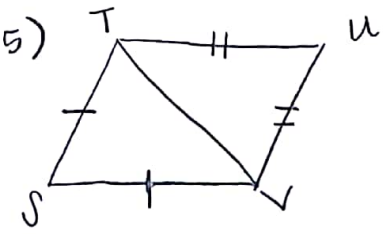
Name the postulate or theorem used to prove the triangles $\cong$. If none can be used, say none. Write a triangle congruency statement if the triangles are $\cong$.

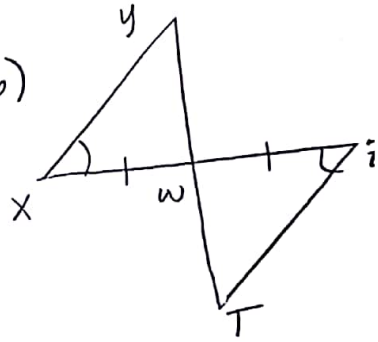
11) 

12) 

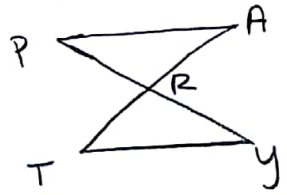
13) 

14) 

15) 

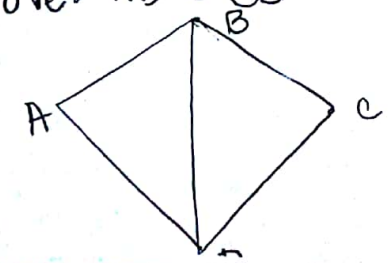
16) 

17) Given: R is the midpt of $\overline{AT}$ & $\overline{PY}$
Prove: $\angle T \cong \angle A$



Statements	Reasons

18) Given: $\overline{DB}$ bisects $\angle ABC$
$\angle A \cong \angle C$
Prove: $\overline{AD} \cong \overline{CD}$



Statements	Reasons

19) What method of Δ congruency only works with right Δs? _____

20) If $\Delta BAD \cong \Delta TOP$, then $\overline{DB} \cong$ ____ and $\Delta PTO \cong$ _____.

21) List the 4 transformations. Which ones produce Congruent figures? which one produces similar figures?

Justify the following statements.

22) $\overline{AB} \cong \overline{BA}$

23) If $\angle A \cong \angle B$ & $\angle B \cong \angle C$, then $\angle A \cong \angle C$.

24) If $x=4$ & $3x=y$, then $3(4)=y$.

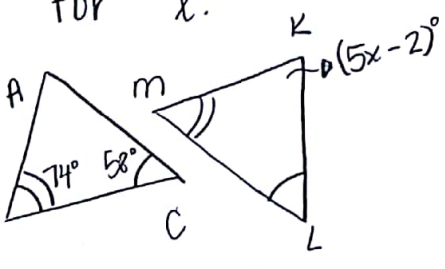
25) If $x=y$, then $x-6=y-6$.

26) If $\overline{AB} \cong \overline{CD}$, then $\overline{CD} \cong \overline{AB}$.

27) $5(x-6)=5x-30$

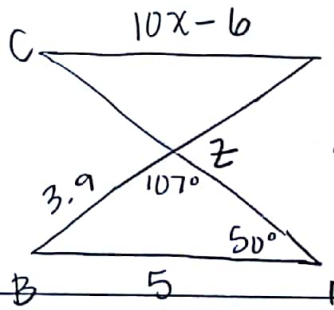
Solve for x.

28)



$\Delta ABC \cong \Delta KML$

29)



$\Delta CNZ \cong \Delta RBZ$

30) If $\Delta XWY \cong \Delta MNO$, $MN=3x$, $OM=45$, $\frac{1}{3}XY=5x-36$.