

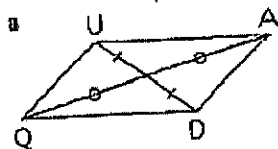
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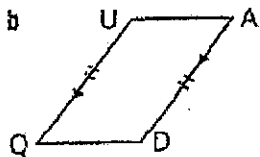
Period:

HW #7-4: Quiz Review

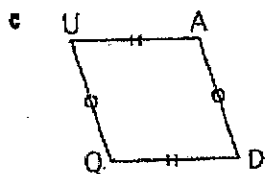
- On a separate sheet of paper, complete #1-18, 21, and 22 on pg. 386 of your textbook.
- Given the diagrams, determine if QUAD is a parallelogram. If so, state or describe the theorem that applies.



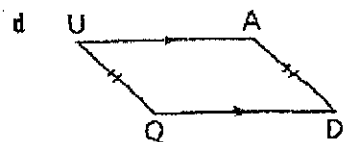
yes! diags bisect each other $\rightarrow$ ||-gram



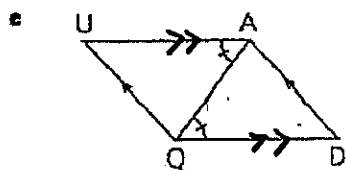
yes! same pair opp. sides $\cong$ and $\parallel \rightarrow$ ||-gram



NO

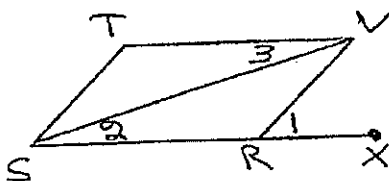


NO



yes! both pairs opp. sides $\parallel \rightarrow$ ||-gram

- Write a two-column proof.
Given: $\angle 1 \cong \angle RST$ and $\angle 2 \cong \angle 3$
Prove: RSTV is a parallelogram



Statements

Reasons

① $\angle 1 \cong \angle RST$, $\angle 2 \cong \angle 3$

② $\overline{ST} \parallel \overline{RV}$

③ $\overline{TV} \parallel \overline{RS}$

④ RSTV is a ||-gram

① given

② corresp. $\angle s \cong \rightarrow \parallel$

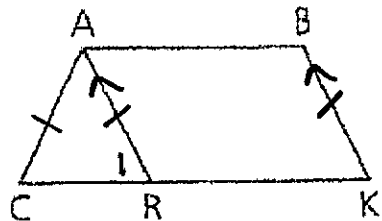
③ alt. int. $\angle s \cong \rightarrow \parallel$

④ both pairs opp. sides $\parallel \rightarrow$ ||-gram

4. Write a two-column proof.

Given: $\triangle CAR$ is isosceles with base $\overline{CR}$, $\overline{AC} \cong \overline{BK}$ and $\angle C \cong \angle K$

Prove: $BARK$ is a parallelogram.

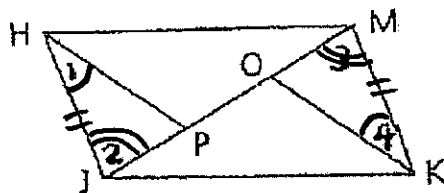


Statements	Reasons
① $\triangle CAR$ is isos. w/ base $\overline{CR}$	① given
② $\overline{AC} \cong \overline{AR}$	② def. of isos. $\triangle$
③ $\overline{AC} \cong \overline{BK}$	③ given
④ $\overline{AR} \cong \overline{BK}$	④ Trans. prop. $\cong$
⑤ $\angle C \cong \angle K$	⑤ given
⑥ $\angle C \cong \angle 1$	⑥ $\triangle \rightarrow \triangle$
⑦ $\angle K \cong \angle 1$	⑦ Trans. prop. $\cong$
⑧ $\overline{AR} \parallel \overline{BK}$	⑧ corresp. $\angle s \cong \rightarrow \parallel$
⑨ $BARK$ is a $\parallel$ -gram	⑨ same pair opp. sides $\cong$ and $\parallel \rightarrow \parallel$ -gram

5. Write a two-column proof.

Given: $HJKM$ is a parallelogram and $\angle 1 \cong \angle 4$

Prove: $\overline{MP} \cong \overline{JO}$



Statements	Reasons
① $HJKM$ is a $\parallel$ -gram	① given
$\angle 1 \cong \angle 4$	
② $\overline{HJ} \cong \overline{KM}$	② $\parallel$ -gram $\rightarrow$ opp. sides $\cong$
③ $\overline{HJ} \parallel \overline{KM}$	③ $\parallel$ -gram $\rightarrow$ opp. sides $\parallel$
④ $\angle 2 \cong \angle 3$	④ $\parallel \rightarrow$ alt. int. $\angle s \cong$
⑤ $\triangle HJP \cong \triangle KMO$	⑤ ASA $\cong$
⑥ $\overline{JP} \cong \overline{MO}$	⑥ CPCTC
⑦ $JP + PO = JO$, $OP + PM = PM$	⑦ seg. add. post.
⑧ $JP = MO$	⑧ $\cong \rightarrow =$
⑨ $MO + PO = JO$	⑨ subst. prop. =
⑩ $MP = JO$	⑩ Trans. prop. =
	⑪ $= \rightarrow \cong$

① $x = 80$

② $x = 135$

③ $x = 97$

④ int: 144°
ext: 36°

⑤ int: 156°
ext: 24°

⑥ int: 165°
ext: 15°

⑦ int: 174°
ext: 6°

⑧ 16

⑨ 7

⑩ 7

⑪ 20.4

⑫ 120°

⑬ 60°

⑭ 60°

⑮ 43°

⑮ yes! opp. $\angle s \cong \rightarrow \parallel$ -gram

⑯ (a) octagon

(b) int: 135°
ext: 45°

⑰ (a) $\overline{JK} \cong \overline{LM}$
 $\overline{JM} \cong \overline{KL}$
 $\angle J \cong \angle L$
 $\angle M \cong \angle K$

(b) same pair opp. sides $\cong$ and $\parallel \rightarrow \parallel$ -gram

(c) $ST = 3$ feet

$m\angle QTS = 123^\circ$

$m\angle TQR = 57^\circ$

$m\angle TSR = 57^\circ$