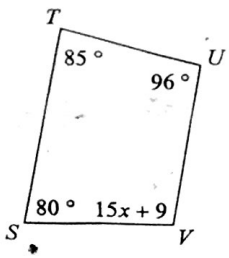
CCSS Geometry Name_____ ID: 1

G5: B Level Test Review

Date_____ Period____

Solve for x.

1)



$85+96+80+15x+9=360$

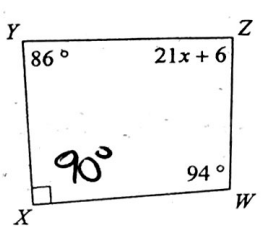
$270+15x=360$

$-270 \quad -270$

$15x=90$

$x=6$

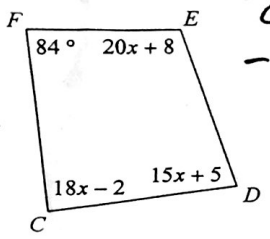
2)



$90+86+94+21x+6=360$

Find the measure of each angle indicated.

3) $m\angle C$



$84+20x+8+15x+5+18x-2=360$

$95+53x=360$

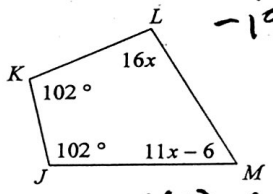
$-95 \quad -95$

$\frac{53x}{53}=\frac{265}{53}$

$x=5$

$C=18(5)-2=C^\circ=88^\circ$

4) $m\angle M$



$102+102+16x+11x-6=360$

$198+27x=360$

$-198 \quad -198$

$\frac{27x}{27}=\frac{162}{27}$

$x=6$

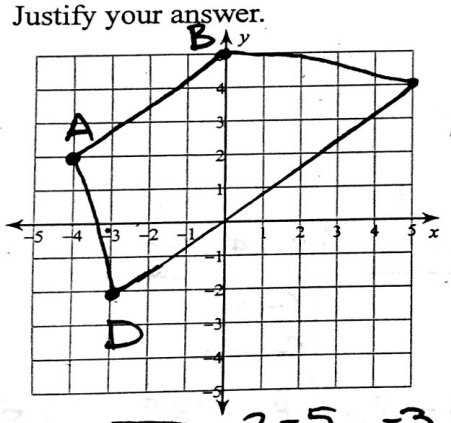
$M=11(6)-6$

$=60^\circ$

$x_1\ y_1 \quad x_2\ y_2$

Plot A(-4, 2) B(0, 5) C (5, 4) and D (-3, -2)

5) What kind of quadrilateral is ABCD?
Justify your answer.



C

Slope $=\frac{y_1-y_2}{x_1-x_2}$

Slope $\overline{AB}=\frac{2-5}{-4-0}=\frac{-3}{-4}=\frac{3}{4}$

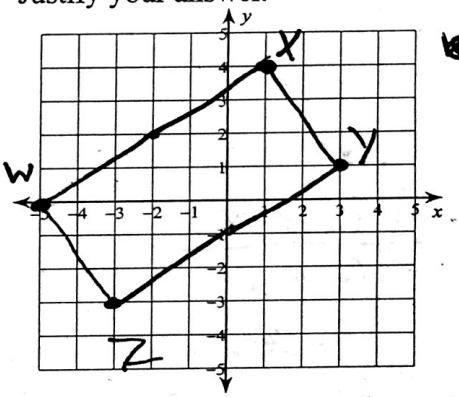
Slope $\overline{DC}=\frac{4-{-2}}{5-{-3}}=\frac{4+2}{5+3}=\frac{6}{8}=\frac{3}{4}$

$\overline{AB} \parallel \overline{DC}$

Trapezoid

Plot points W(-5, 0) X(1, 4) Y(3, 1) & Z (-3, -3)

6) What type of quadrilateral is WXYZ?
Justify your answer.



Slope $\overline{WX}=\frac{0-4}{-5-1}=\frac{-4}{-6}=\frac{4}{6}=\frac{2}{3}$

Slope $\overline{XY}=\frac{4-1}{1-3}=\frac{3}{-2}$

Slope $\overline{ZY}=\frac{-3-1}{-3-3}=\frac{-4}{-6}=\frac{4}{6}=\frac{2}{3}$

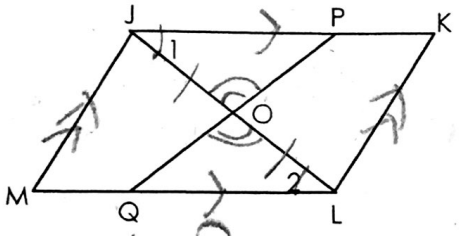
rectangle

Slope $\overline{WZ}=\frac{0-{-3}}{-5-{-3}}=\frac{+3}{-2}=\frac{-3}{2}$

$\overline{WX} \perp \overline{XY}$, $\overline{XY} \perp \overline{ZY}$, $\overline{WZ} \perp \overline{ZY}$, $\overline{WZ} \perp \overline{WX}$

1. Given: $JKLM$ is a parallelogram; $\overline{JO} \cong \overline{OL}$

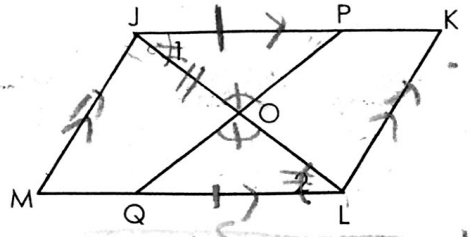
Prove: $\overline{OP} \cong \overline{OQ}$



S	R
JKLM is parallelogram	Given
$\overline{JO} \cong \overline{OL}$	Given
$\angle KJL \cong \angle MLJ$	Alt. inter. angles $\cong$
$\angle POJ \cong \angle QOL$	Vert. angles $\cong$
$\triangle JPO \cong \triangle LQO$	ASA $\cong$
$\overline{OP} \cong \overline{OQ}$	CPCTC

2. Given: $JKLM$ is a parallelogram; $\overline{JP} \cong \overline{QL}$

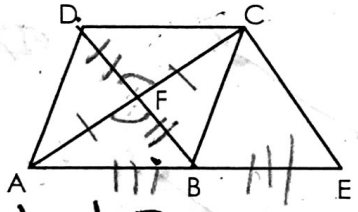
Prove: $\overline{JL}$ and $\overline{QP}$ bisect each other



S	R
JKLM is a parallelogram	Given
$\overline{JP} \cong \overline{QL}$	Given
$\angle PJO \cong \angle OLQ$	Alt. interior angles $\cong$
$\angle POJ \cong \angle QOL$	vert. angles $\cong$
$\triangle JOP \cong \triangle LOQ$	AAS $\cong$
$\overline{QO} \cong \overline{PO}$	CPCTC
$\overline{JO} \cong \overline{OL}$	CPCTC
$\overline{JL}$ and $\overline{QP}$ bisect	def of bisect

5. Given: $\overline{AF} \cong \overline{CF}$; $\overline{BF} \cong \overline{DF}$; $\overline{AB} \cong \overline{BE}$

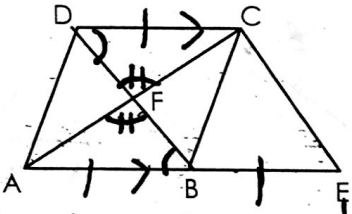
Prove: $\overline{CD} \cong \overline{BE}$



Statements	Reasons
$\overline{AF} \cong \overline{CF}$	Given
$\overline{BF} \cong \overline{DF}$	Given
$\overline{AB} \cong \overline{BE}$	Given
$\angle AFB \cong \angle CFD$	vertical angles $\cong$
$\triangle DFC \cong \triangle BFA$	SAS $\cong$
$\overline{CD} \cong \overline{AB}$	CPCTC
$\overline{CD} \cong \overline{BE}$	$\overline{AB} \cong \overline{BE}$

6. Given: $\overline{CD} \cong \overline{BE}$; $\overline{CD} \parallel \overline{BE}$; $\overline{AB} \cong \overline{BE}$

Prove: $\overline{AF} \cong \overline{CF}$



Statements	Reasons
$\overline{CD} \cong \overline{BE}$	Given
$\overline{CD} \parallel \overline{BE}$	Given
$\angle CDB \cong \angle ABD$	Alternate interior angles $\cong$
$\angle DFC \cong \angle BFA$	Vertical angles $\cong$
$\triangle DCF \cong \triangle BAF$	AAS $\cong$
$\overline{AF} \cong \overline{CF}$	CPCTC