

Review of 5.1 - 5.5

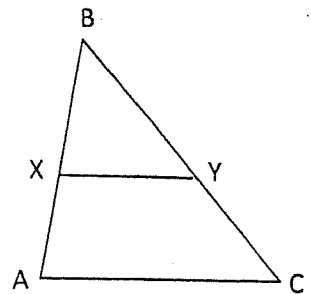
1. Find the value of x and y that makes $ABCD$ a parallelogram.

$$AB = 6x + 30, BC = 2x - 5, CD = 2y - 10, AD = y - 35$$

2. Determine whether quadrilateral $DEFG$ with vertices $D(-3,2)$, $E(2,-3)$, $F(6,0)$ and $G(1,5)$ is a parallelogram

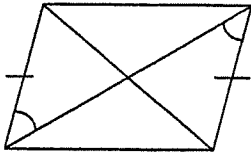
3. \overline{XY} is the midsegment of $\triangle ABC$.
 $BY = 2x^2 - 4x$; $YC = 2x + 20$; $XY = 3x + 8$

Find AC .

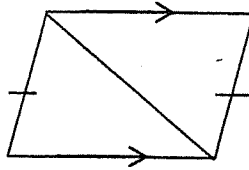


4. Determine whether the following quadrilaterals are parallelograms. Justify your answers. Include a definition and/or theorem as part of your explanation.

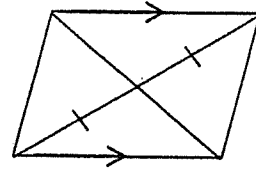
a.



b.



c.



5. Prove the following theorem. Provide a given, prove, diagram and flow proof.

If a quadrilateral is a parallelogram, then the opposite sides are congruent.

Given:

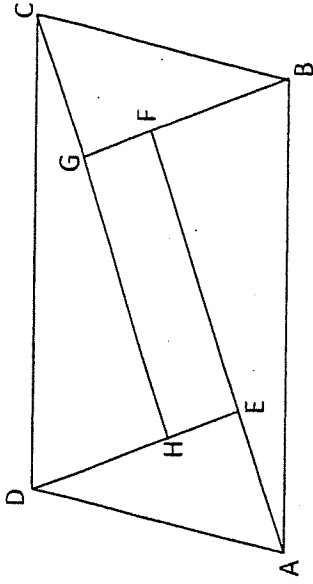
Diagram:

Prove:

6. Write a flow proof for the following.

Given: $EFGH$ is a parallelogram
 $\overline{HD} \cong \overline{FB}$; $\overline{AE} \cong \overline{CG}$; $\overline{DA} \parallel \overline{BC}$

Prove: $ABCD$ is a parallelogram





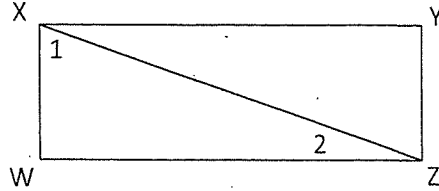
Geometry (H)
Chapter 5 – Proof practice

Name: _____

Write a flow proof for each of the following.

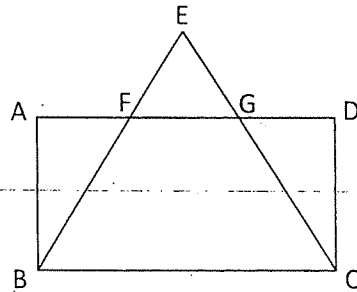
1. Given: $\square WXYZ$; $\angle 1$ complementary $\angle 2$

Prove: $WXYZ$ is a rectangle



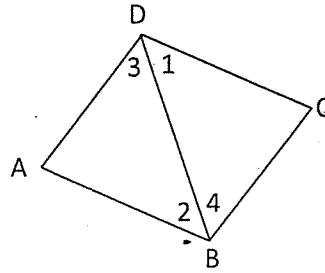
2. Given: Rect $ABCD$; $\overline{BE} \cong \overline{CE}$

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



3. Given: $\angle 1 \cong \angle 2$, $\angle 3 \cong \angle 4$, $\angle 2 \cong \angle 3$

Prove: ABCD is a rhombus



4. Given: $\triangle SQR$ isosceles w/ vertex $\angle Q$
 $\triangle PQT$ isosceles w/ vertex $\angle Q$
 $\overline{TP} \parallel \overline{RS}$

Prove: RSPT is an isosceles trapezoid

