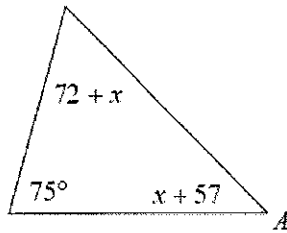


**SHOW ALL OF THE NECESSARY WORK FOR FULL CREDIT!**

1.  $x = 12$

$m\angle A = 69$

$75 + 72 + x + x + 57 = 180$   
 $2x + 204 = 180$   
 $2x = 24$   
 $x = 12$

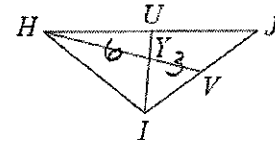


2.  $YV = 3$

$HV = 9$

HV and UI are medians.

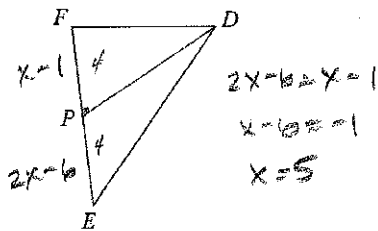
Find HV if HY = 6



3.  $x = 5$

PD is a median.

Find x if  $PE = 2x - 6$  and  $PF = x - 1$



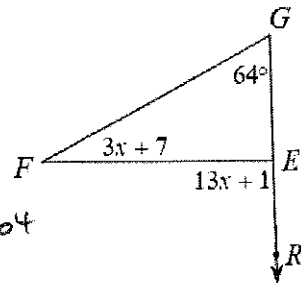
$2x - 6 = x - 1$   
 $x - 6 = -1$   
 $x = 5$

4.  $x = 7$

$m\angle FER = 91^\circ$

$m\angle FEG = 89^\circ$

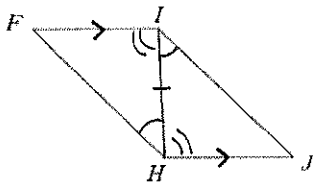
$13x + 1 = 3x + 7 + 64$   
 $13x + 1 = 3x + 71$   
 $10x = 70$   
 $x = 7$



Circle whether the triangles are congruent or not. If they are congruent, state the reason why.

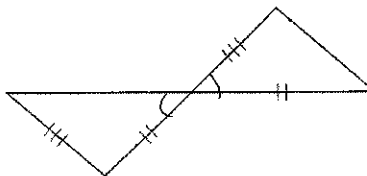
5. Congruent? **YES** or NO

Why? ASA



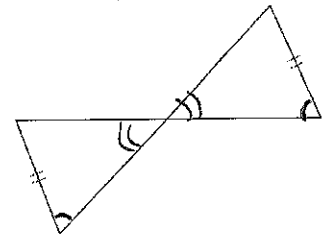
6. Congruent? YES or **NO**

Why? \_\_\_\_\_

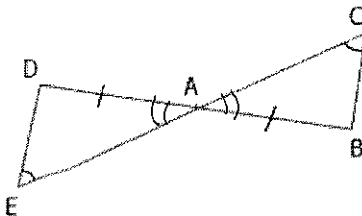


7. Congruent? **YES** or NO

Why? AAS



8.



**Given:** A is the midpoint of  $\overline{BD}$   
 $\angle E \cong \angle C$

**Prove:**  $\triangle ABC \cong \triangle ADE$

Statements	Reasons
1. A is the midpoint of BD	1. Given
2. $\angle E \cong \angle C$	2. <u>Given</u>
3. $\overline{AD} \cong \overline{AB}$	3. Definition of midpoint
4. $\angle DAE \cong \angle BAC$	4. <u>Vertical Angles</u>
5. $\triangle ABC \cong \triangle ADE$	5. <u>AAS</u>

**WORD BANK** (not all words are used)

SAS HL ASA

AAS SSS

Reflexive Property

Given

Vertical Angles

$\angle ADE \cong \angle ABC$

$\angle DAE \cong \angle BAC$

$\overline{AD} \cong \overline{AB}$

$\overline{AE} \cong \overline{AC}$