

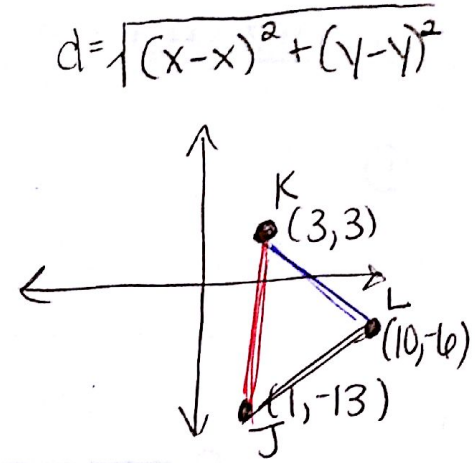
② Classify ΔJKL by its sides:

$J(1, -13)$ $K(3, 3)$ $L(10, -6)$

$$JK = \sqrt{(3-1)^2 + (3+13)^2} = \sqrt{260}$$

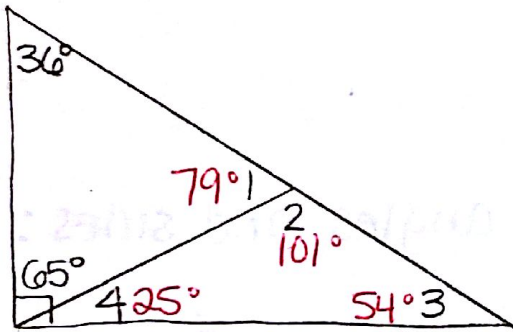
$$KL = \sqrt{(3-10)^2 + (3+6)^2} = \sqrt{130} \checkmark$$

$$JL = \sqrt{(10-1)^2 + (-6+13)^2} = \sqrt{130} \checkmark$$



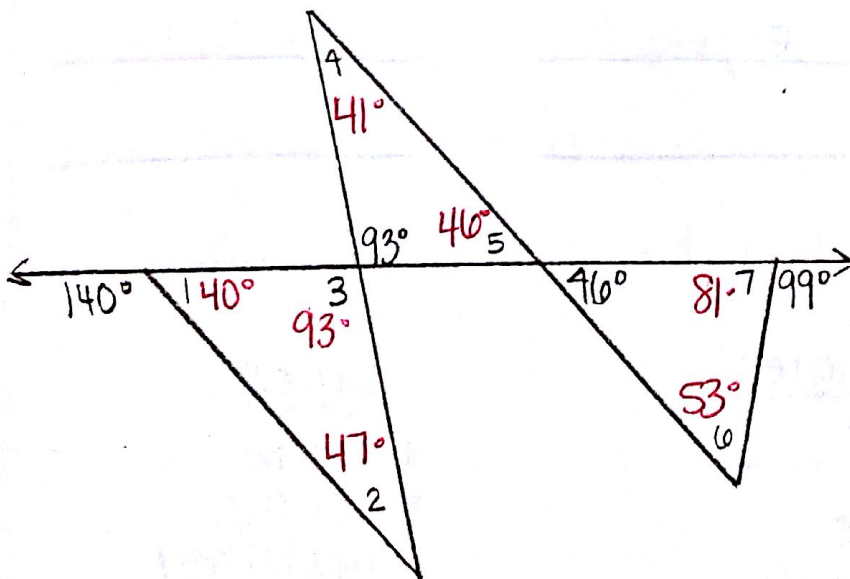
ΔJKL is
a(n) isosceles Δ .

③ Find missing angles:



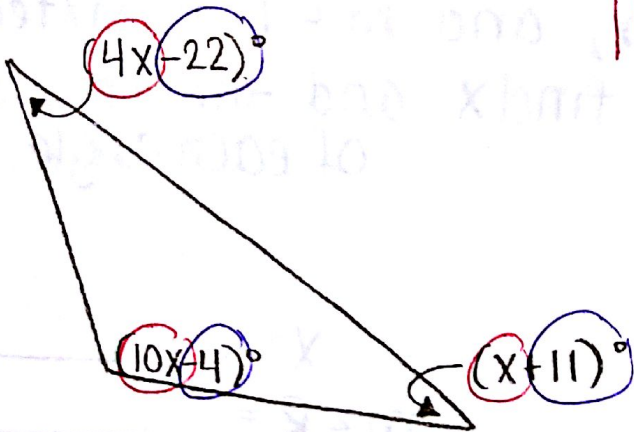
- $m\angle 1: \underline{79}$
- $m\angle 2: \underline{101}$
- $m\angle 3: \underline{54}$
- $m\angle 4: \underline{25}$

④ Find missing angles:



- $m\angle 1: \underline{40}$
- $m\angle 2: \underline{47}$
- $m\angle 3: \underline{93}$
- $m\angle 4: \underline{41}$
- $m\angle 5: \underline{46}$
- $m\angle 6: \underline{53}$
- $m\angle 7: \underline{81}$

⑤ solve for x : Δ sum thm...



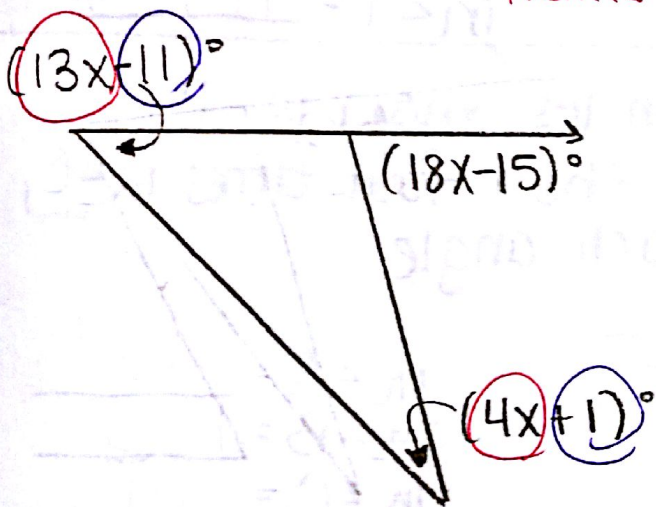
$$15x - 15 = 180$$

$$15x = 195$$

$$x = 13$$

$$x = \underline{13}$$

⑥ solve for x : ext. angle thm...



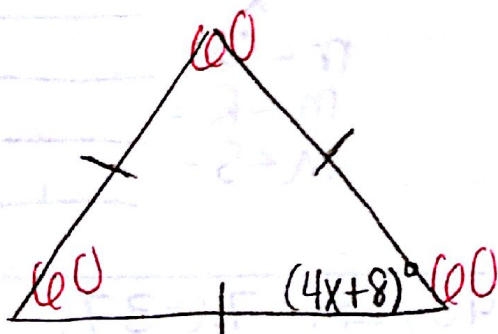
$$17x - 10 = 18x - 15$$

$$\begin{array}{r} -17x \\ \hline -10 = x - 15 \\ +15 \quad +15 \end{array}$$

$$5 = x$$

$$x = \underline{5}$$

⑦ solve for x.

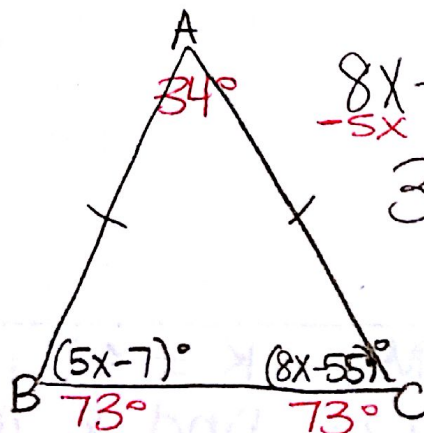


$$4x + 8 = 60$$

$$4x = 52$$

$$x = \underline{13}$$

⑧ Find $m\angle A$.



$$8x - 55 = 5x - 7$$

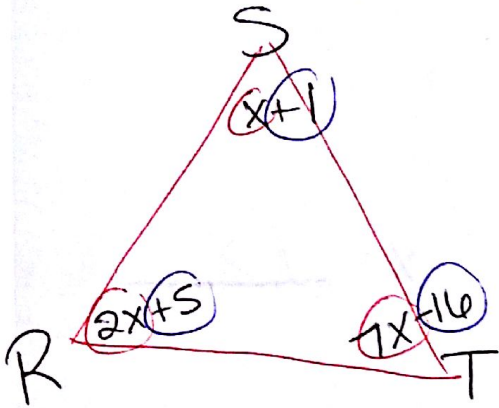
$$3x = 48$$

$$x = 16$$

$$x = \underline{16}$$

$$m\angle A = \underline{34^\circ}$$

- ⑨ In $\triangle RST$, if $m\angle R$ is 5 more than twice x , $m\angle S$ is one more than x , and $m\angle T$ is sixteen less than 7 times x , find x and the measure of each angle.



$$10x - 10 = 180$$

$$10x = 190$$

$$x = 19$$

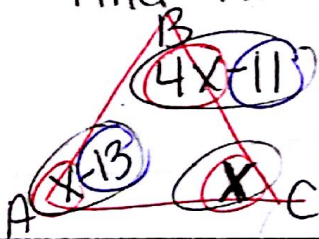
$$x = \frac{19}{1}$$

$$m\angle R = \frac{43}{1}$$

$$m\angle S = \frac{20}{1}$$

$$m\angle T = \frac{117}{1}$$

- ⑩ In $\triangle ABC$, if $m\angle A$ is thirteen less than $m\angle C$, and $m\angle B$ is eleven less than four times $m\angle C$, find the measure of each angle.



$$6x - 24 = 180$$

$$6x = 204$$

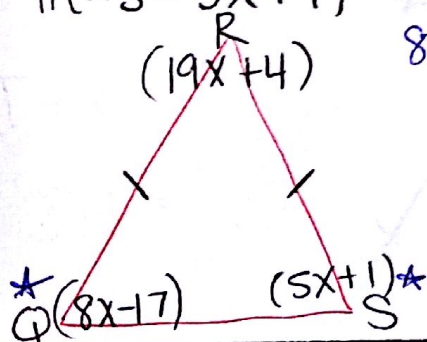
$$x = 34$$

$$m\angle A = \frac{21}{1}$$

$$m\angle B = \frac{125}{1}$$

$$m\angle C = \frac{34}{1}$$

- ⑪ In $\triangle QRS$, if $QR \cong RS$, $m\angle Q = 8x - 17$, $m\angle R = 19x + 4$, $m\angle S = 5x + 1$, find x and measure of each angle.



$$8x - 17 = 5x + 1$$

$$3x = 18$$

$$x = 6$$

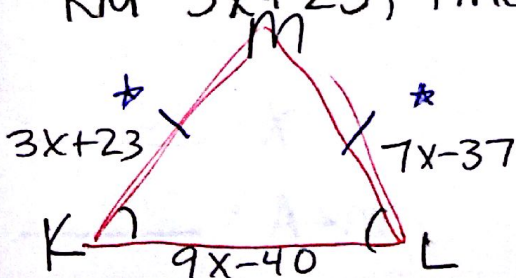
$$x = \frac{6}{1}$$

$$m\angle Q = \frac{31}{1}$$

$$m\angle R = \frac{118}{1}$$

$$m\angle S = \frac{31}{1}$$

- ⑫ In $\triangle KLM$, $\angle K \cong \angle L$, $KL = 9x - 40$, $LM = 7x - 37$, $KM = 3x + 23$, find x and the measure of each side.



$$7x - 37 = 3x + 23$$

$$4x = 60$$

$$x = 15$$

$$x = \frac{15}{1}$$

$$KL = \frac{95}{1}$$

$$LM = \frac{68}{1}$$

$$KM = \frac{68}{1}$$