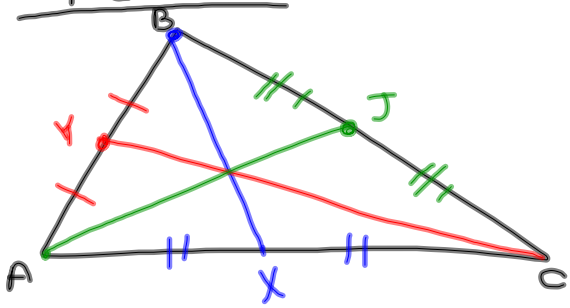
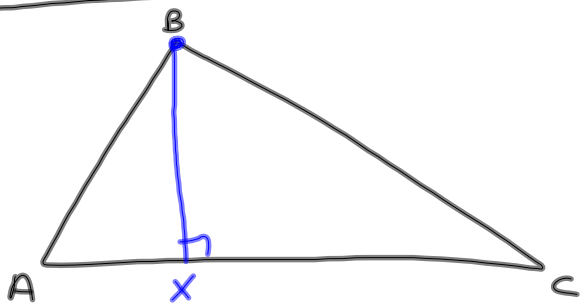
11-20-13

5th Geo

Median

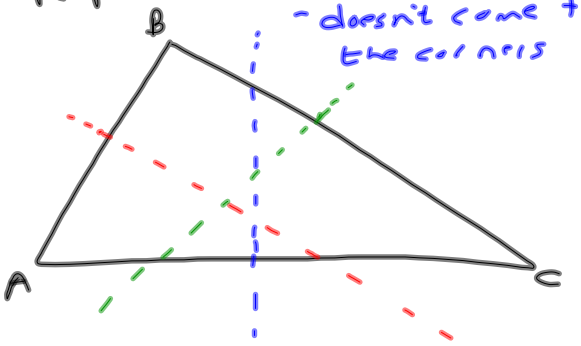


Altitude

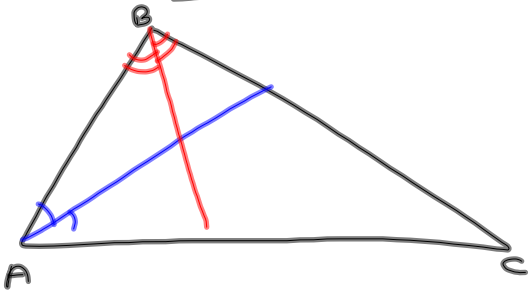


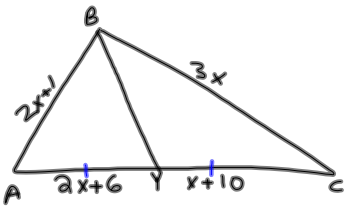
Perpendicular Bisector

- doesn't come from the corners



Angle bisector





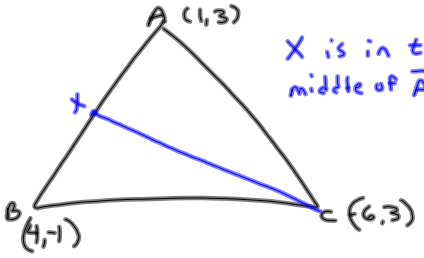
Find BC if $\overline{BY}$ is the median of $\triangle ABC$

$2x+6 = x+10$

$x = 4$

$BC = 3x = 3 \cdot 4 = 12$

In $\triangle ABC$, $A = (1,3)$ $B = (4,-1)$ and $C = (-6,3)$. What are the coordinates of X if $\overline{CX}$ is a median of $\triangle ABC$?

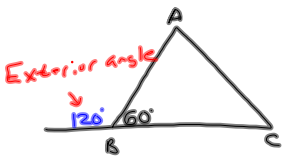


X is in the middle of $\overline{AB}$.

$X = \left(\frac{4+1}{2}, \frac{-1+3}{2}\right)$

$(2\frac{1}{2}, 1)$

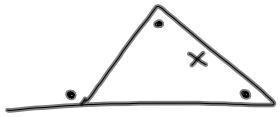
New idea

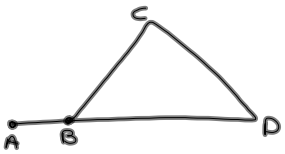


What is true about $\angle A + \angle C$?

120°

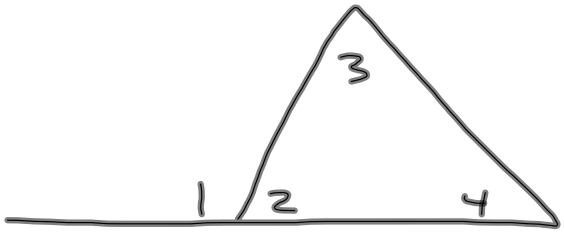
2 remote interior angles add up to the exterior angle.





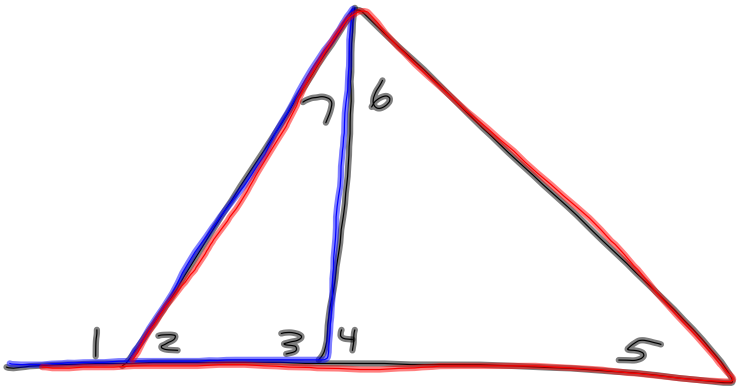
$\angle ABC > \angle C$

$\angle ABC > \angle D$



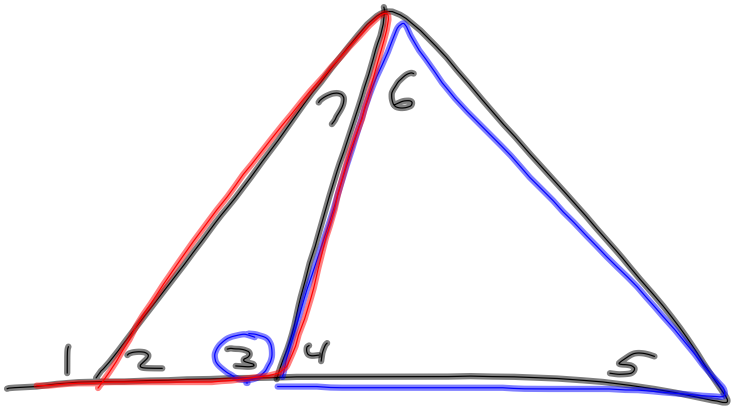
Which angles is ∠1 greater than?

∠3 and ∠4



∠1 is greater than which angles?

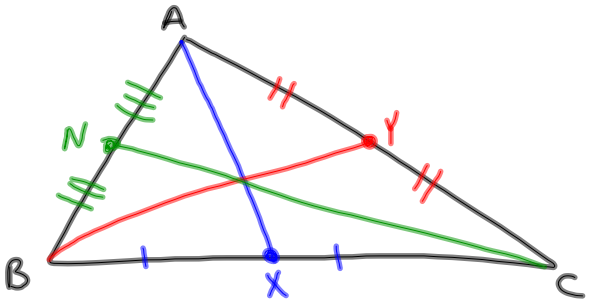
∠3, ∠7, ∠5, ∠6



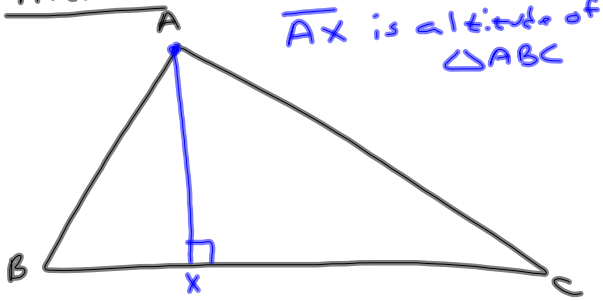
∠1 > ∠3 ∠3 is bigger than ∠5, ∠6

11-20-13
6th Geo

Median

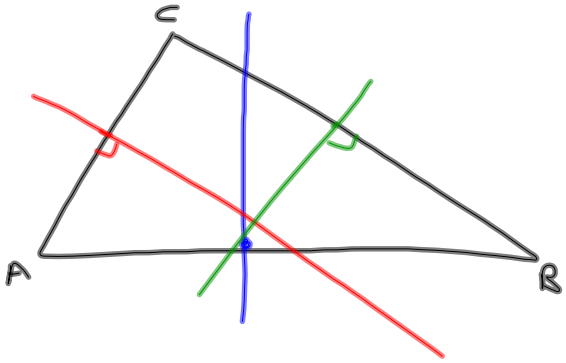


Altitude

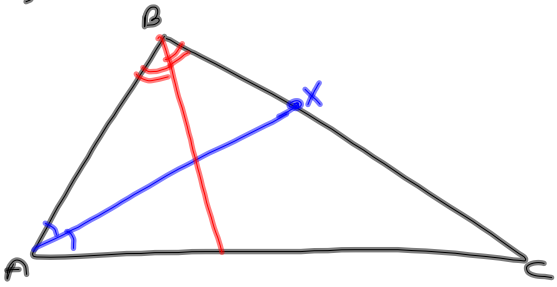


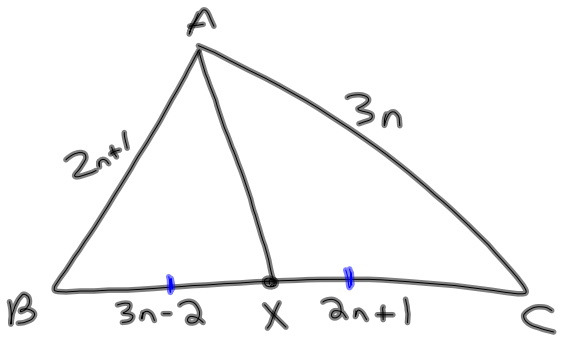
$\overline{AX}$ is altitude of $\triangle ABC$

Perpendicular Bisector



Angle Bisector





If $\overline{AX}$ is median of $\triangle ABC$, what is AB?

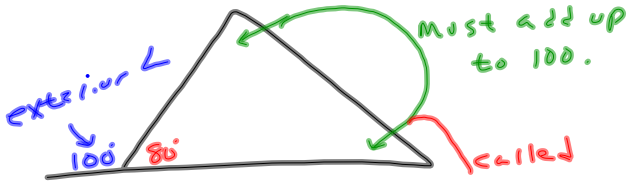
$3n-2 = 2n+1$

$n = 3$

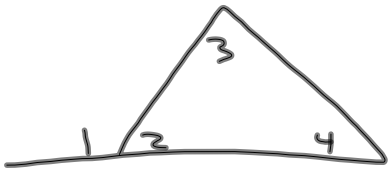
$AB = 2n+1 = 2 \cdot 3 + 1 = 7$

New idea

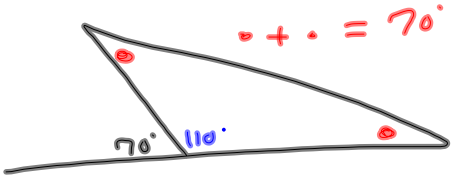
Exterior angle theorem

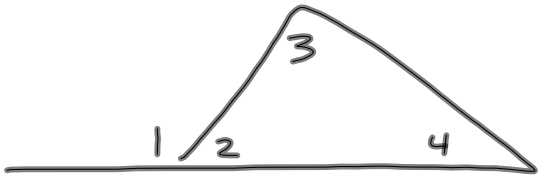


exterior ∠ = sum of the two remote interior ∠'s.

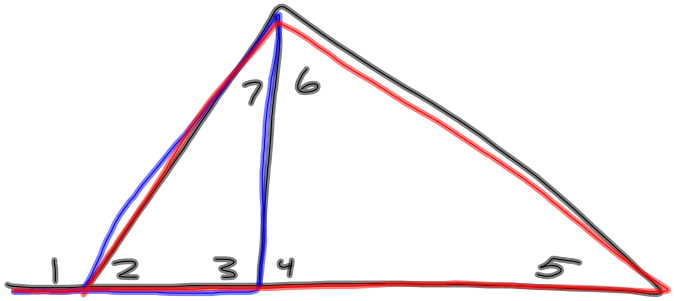


$\angle 1 = \angle 3 + \angle 4$





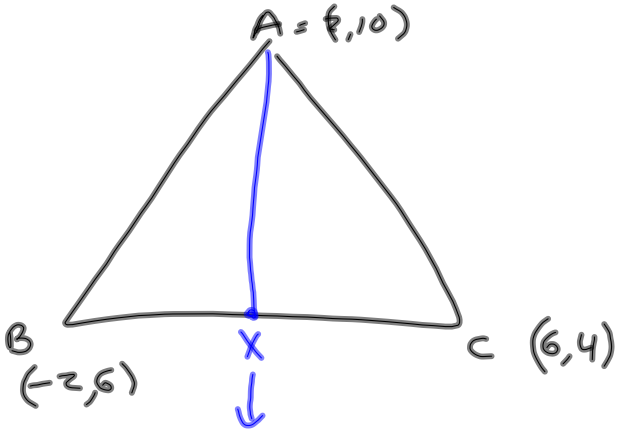
$\angle 1$ must be larger than $\angle 3 + \angle 4$



$\angle 1$ is larger than which angles?

$\angle 3, \angle 7$ $\angle 5, \angle 6$

In $\triangle ABC$, $A = (2, 10)$ $B = (-2, 6)$ $C = (6, 4)$. If $\overline{AX}$ is a median of $\triangle ABC$, where is X located?



$\left(\frac{-2+6}{2}, \frac{6+4}{2}\right)$

$(2, 5)$