

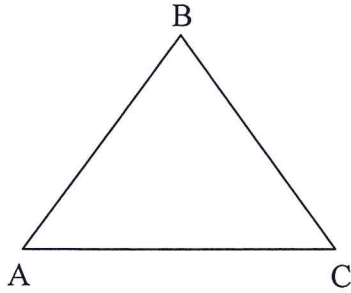
Name _____

Period _____ Date _____

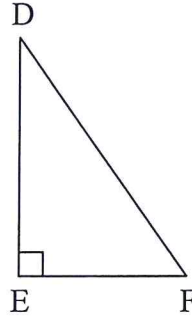
Medians and Altitudes of Triangles

Draw all altitudes in each triangle using a straightedge.

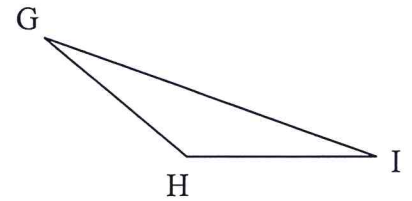
1.



2.



3.



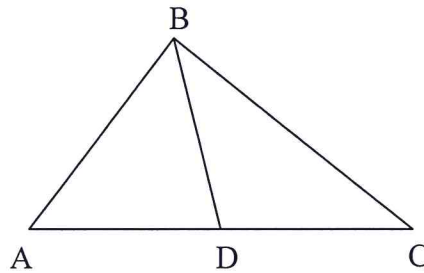
4. Given: \overline{BD} is a median of $\triangle ABC$

$$AB = x - 7$$

$$AD = x + 3$$

$$DC = 2x - 17$$

Find: AB



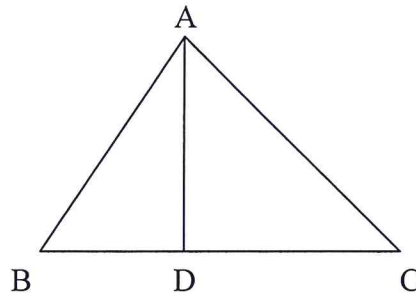
5. Given: \overline{AD} is an altitude of $\triangle ABC$

$$\overline{BD} = 2x$$

$$\overline{DC} = 3x - 4$$

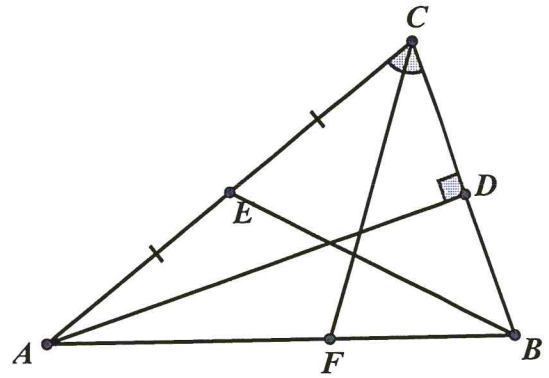
$$\angle ADC = 4x + 10$$

Find: BC



Refer to $\triangle ABC$ and name the following.

6. A median of $\triangle ABC$ _____
7. An altitude of $\triangle ABC$ _____
8. A bisector of an angle of $\triangle ABC$ _____



9. Based on the pictures. Find the following lengths:

- a. $BE =$ _____
- b. $DE =$ _____ $EF =$ _____ $DF =$ _____
- c. $AD =$ _____ $CF =$ _____
- d. $BT =$ _____ $CT =$ _____
- e. In $\triangle ABC$, let \overline{AH} be the altitude from the vertex A to side \overline{BC} . Find ...

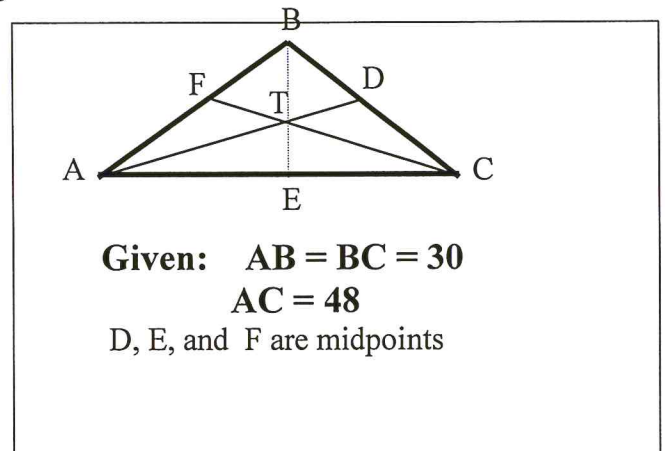
$AH =$ _____ $BH =$ _____

f. How long is \overline{EH} ? _____

g. How far is T from \overline{AB} ? _____

h. Which of the following describes \overline{BE} ? (circle the correct answer(s))

Altitude, median, angle bisector

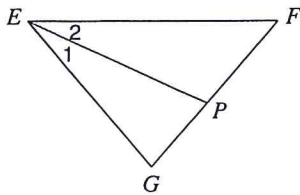


Angle bisectors

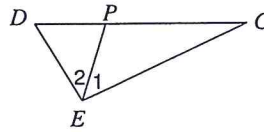
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Each figure shows a triangle with one of it's angles bisected. The bisected angles are marked as 1 and 2.

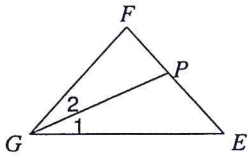
1) Find $m\angle 1$ if $m\angle 2 = 25^\circ$.



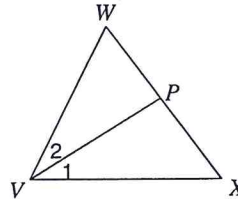
2) $m\angle CED = 96^\circ$. Find $m\angle 1$.



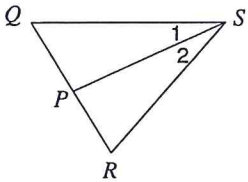
3) Find $m\angle 1$ if $m\angle EGF = 48^\circ$.



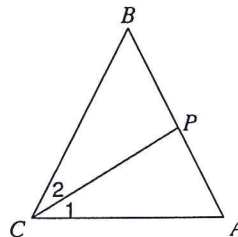
4) Find $m\angle 2$ if $m\angle XVW = 64^\circ$.



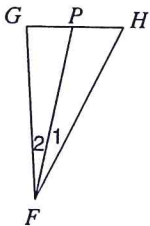
5) $m\angle 1 = 24^\circ$. Find $m\angle 2$.



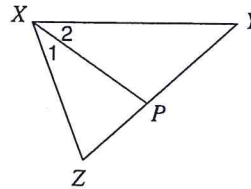
6) Find $m\angle ACB$ if $m\angle 2 = 31^\circ$.



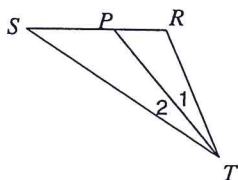
11) $m\angle HFG = 30^\circ$. Find $m\angle 1$.



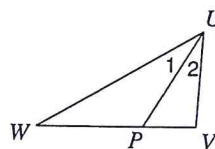
12) $m\angle ZXY = 68^\circ$. Find $m\angle 2$.



13) Find x if $m\angle 1 = 6x - 1$ and $m\angle RTS = 10x + 4$.



14) $m\angle 2 = 4x + 4$ and $m\angle 1 = 5x - 2$. Find x .



15) Find x if $m\angle 2 = -4 + 7x$ and $m\angle HFG = 11x + 10$.

16) Find x if $m\angle 1 = 4x + 3$ and $m\angle 2 = 3x + 7$.

