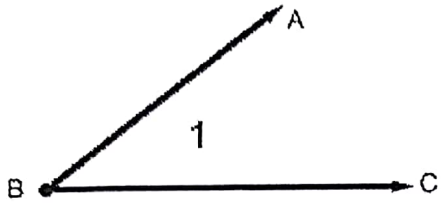
Name _____

Date _____ Period _____

Analytic Geometry

Basics of Geometry Review

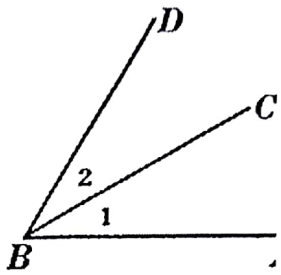
1. Name this angle every way possible



∠ABC ∠B

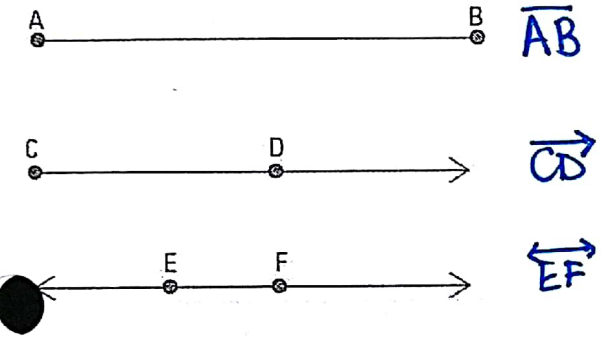
∠CBA ∠1

2. What can you NOT name this angle?



∠B

3. Name each line, segment, or ray

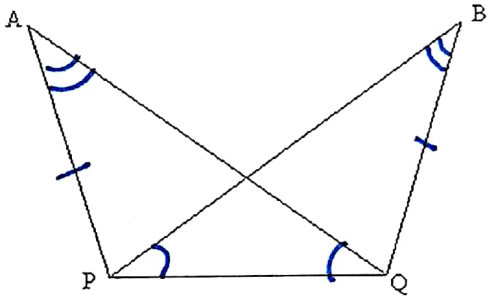


$\overline{AB}$

$\overrightarrow{CD}$

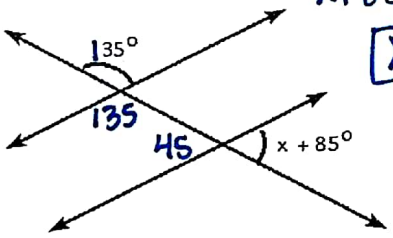
$\overleftrightarrow{EF}$

4. Mark the figure with the following given information.



a) $\overline{AP} \cong \overline{BQ}$
b) $\angle BPQ \cong \angle AQP$
c) $\angle PAQ \cong \angle QBP$

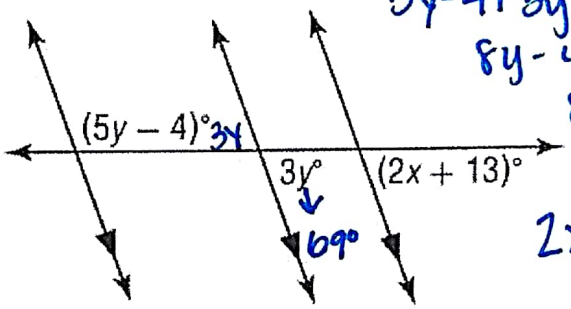
5. Solve for x



$x + 85 = 45$

$x = -40$

6. Given parallel lines, solve for x and y



$5y - 4 + 3y = 180$

$8y - 4 = 180$

$8y = 184$

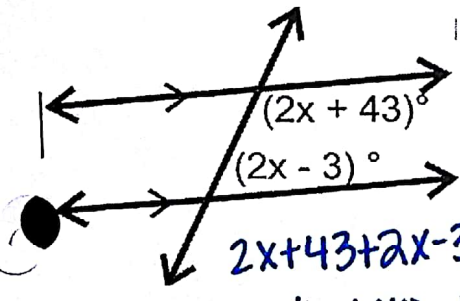
$y = 23$

$2x + 13 = 69$

$2x = 56$

$x = 28$

7. Solve for x



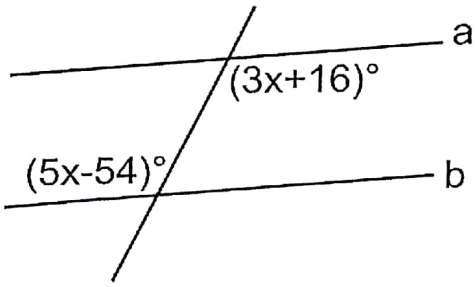
$2x + 43 + 2x - 3 = 180$

$4x + 40 = 180$

$4x = 140$

$x = 35$

8. Solve for x given parallel lines



$5x - 54 = 3x + 16$

$2x = 70$

$x = 35$

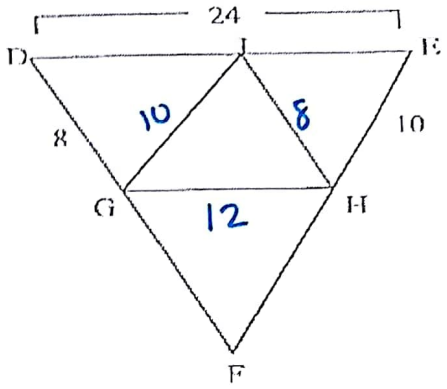
9. Answer the following questions

GH, HJ and JG are midsegments of ΔDEF

1) $\overline{JH} \parallel$ $\overline{DF}$
2) $\overline{DE} \parallel$ $\overline{GH}$
3) $EF =$ 20
4) $GH =$ 12
5) $DF =$ 16
6) $JH =$ 8
7) Find the perimeter of ΔGHJ $10+12+8=30$

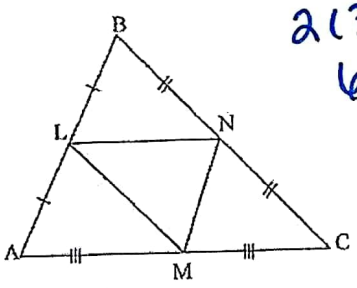
8) If $m\angle DGJ = 110°$, find $m\angle DFH$ 110°

9) If $m\angle DEH = 52°$, find $m\angle GHE$ 128°



10. Answer the following question.

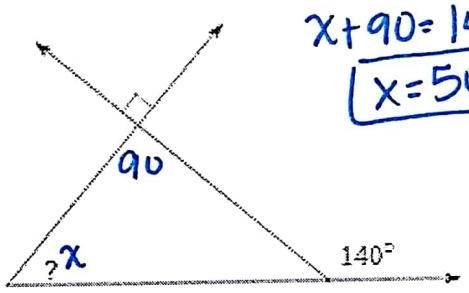
If $LM = 3x+7$, and $BC = 7x+6$, then $LM =$ 31



$2(3x+7) = 7x+6$
$6x+14 = 7x+6$
$14 = x+6$
$x = 8$

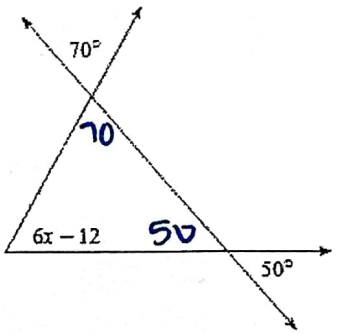
$LM = 3(8)+7$
$= 24+7 = 31$

11. Find the missing measurement.



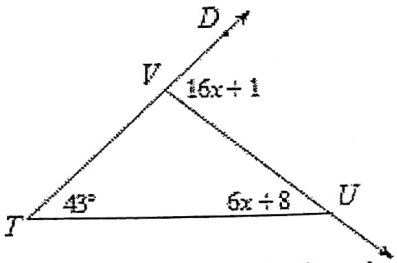
$x+90 = 140$
$x = 50°$

12. Solve for x



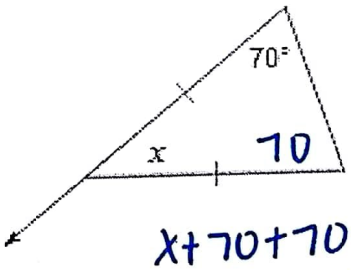
$6x-12+50+70 = 180$
$6x+108 = 180$
$6x = 72$
$x = 12$

13. Solve for x



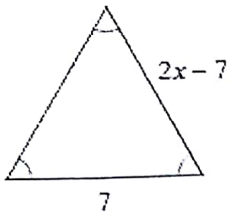
$43+6x+8 = 16x+1$
$6x+51 = 16x+1$
$50 = 10x$
$x = 5$

14. Solve for x



$x+70+70 = 180$
$x+140 = 180$
$x = 40°$

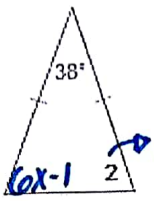
15. Solve for x



$2x-7=7$
$2x=14$
$\boxed{x=7}$

16. Solve for x

$m\angle 2 = 6x-1$

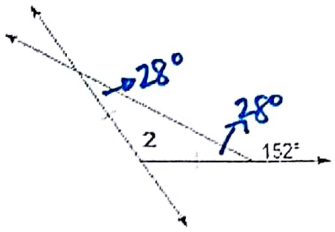


$6x-1$

$6x-1+6x-1+38=180$
$12x+36=180$
$12x=144$
$\boxed{x=12}$

17. Solve for x

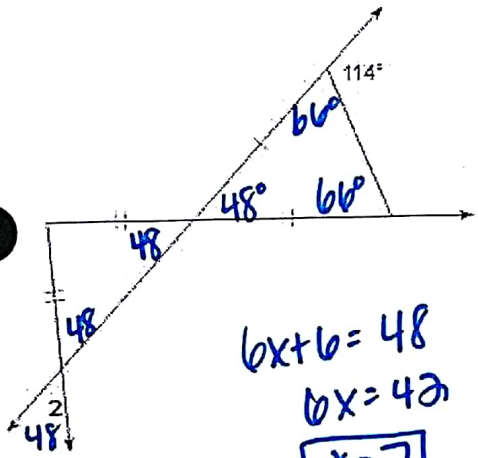
$m\angle 2 = x+134$



$x+134+28+28=180$
$x+190=180$
$\boxed{x=-10}$

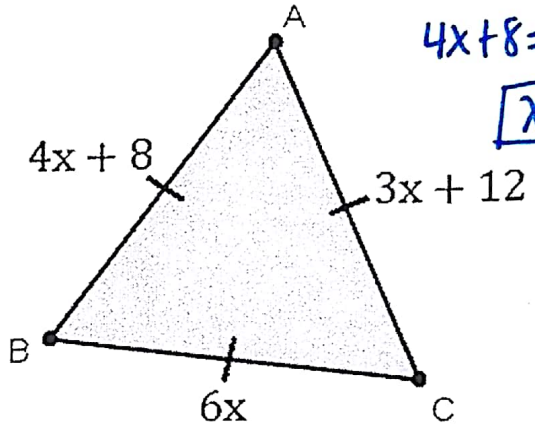
18. Solve for x

$m\angle 2 = 6x+6$



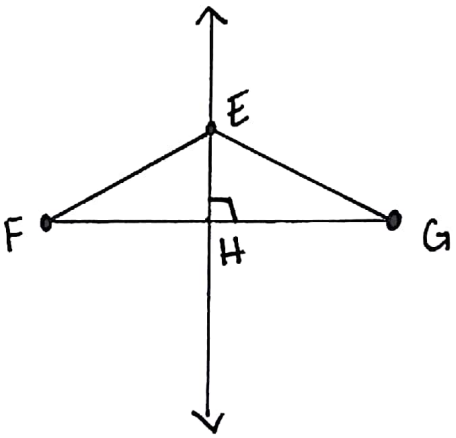
$6x+6=48$
$6x=42$
$\boxed{x=7}$

19. Solve for x



$4x+8=3x+12$
$\boxed{x=4}$

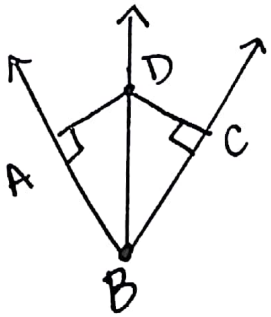
20. Given $\overline{FE} \cong \overline{EG}$, $FG=14$,
Find GH. 7



21. $\overline{FH} \cong \overline{GH}$. If $FE=2x+1$, $GE=26$, find x. 12.5

$2x+1=26$
$2x=25$
$x=12.5$

22. $\overrightarrow{BD}$ is an angle bisector. If $AD=x+8$, $CD=3x-4$, find AD. 14



$x+8=3x-4$
$12=2x$
$x=6$

23. If $\overline{AD} \cong \overline{DC}$, $m\angle ABC=52°$, find $m\angle ABD$. 26°

$52/2=26$