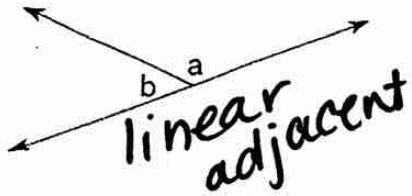
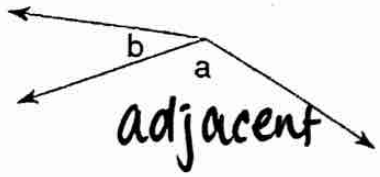
Name: _____ Date: CW 8/19/19

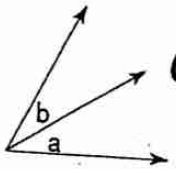
Name the angle relationship: linear pair, vertical angles, or adjacent.

1. 

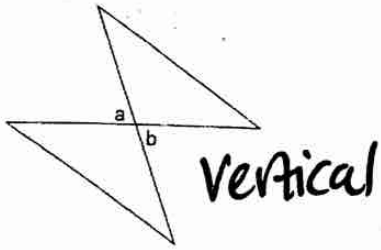
linear adjacent

2. 

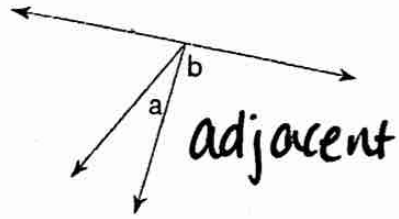
adjacent

3. 

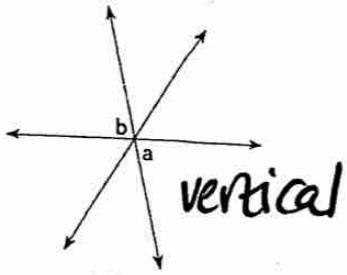
adjacent

4. 

Vertical

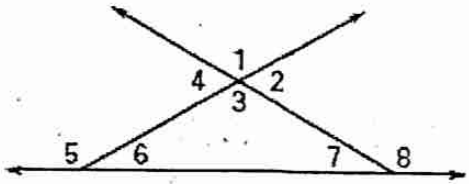
5. 

adjacent

6. 

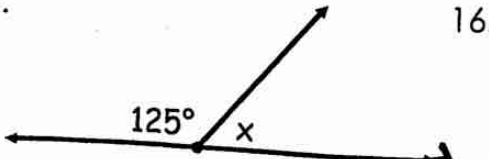
vertical

Use the diagram to tell whether the angles are vertical angles, a linear pair, or neither.

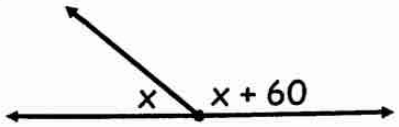


7. ∠ 1 and ∠ 2 Linear
8. ∠ 1 and ∠ 3 Vertical
9. ∠ 1 and ∠ 4 Linear
10. ∠ 1 and ∠ 5 neither
11. ∠ 1 and ∠ 6 neither
12. ∠ 1 and ∠ 7 neither
13. ∠ 1 and ∠ 8 neither
14. ∠ 2 and ∠ 4 Vertical

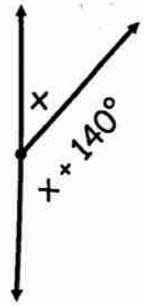
Solve for x. Then explain how you solved #17.

15. 

180 - 125 = 55

16. 

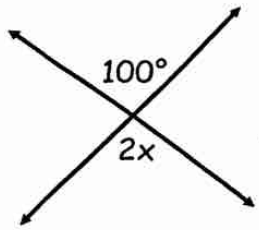
$x + x + 60 = 180$
$2x + 60 = 180$
$2x = 120$
$x = 60$

17. 

$x + x + 140 = 180$
$2x + 140 = 180$
$2x = 40$
$x = 20$

Solve for x. Then explain how you solved #20.

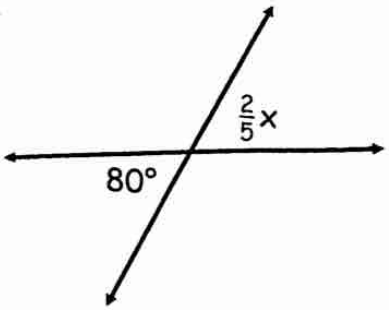
18.



$100 = 2x$

$x = 50$

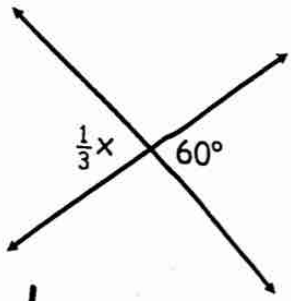
19.



$80 = \frac{2}{5}x$

$x = 200$

20.



$\frac{1}{3}x = 60$

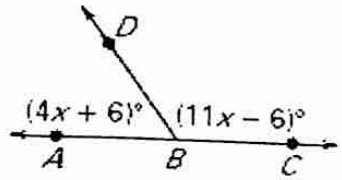
$x = 180$

Use the diagram to find the indicated measures. Then explain how you solved #23.

21. x = 12

m∠ ABD = 54

m∠ DBC = 126



$4x + 6 + 11x - 6 = 180$

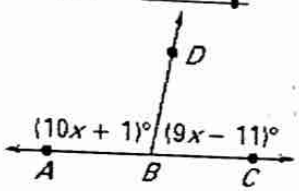
$15x = 180$

$x = 12$

22. x = 10

m∠ ABD = 101

m∠ DBC = 79



$10x + 1 + 9x - 11 = 180$

$19x - 10 = 180$

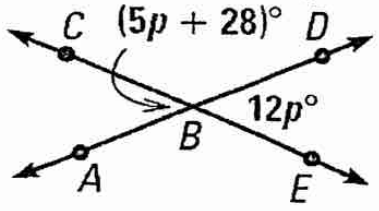
$19x = 190$

$x = 10$

23. p = 4

m∠ ABC = 48

m∠ DBE = 48



$5p + 28 = 12p$

$28 = 7p$

$p = 4$

Geometry

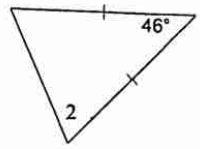
Name_____

2.3 - Practice

Date_____

Find the value of x.

1) $m\angle 2 = 5x + 7$



$46+2(5x+7)=180$

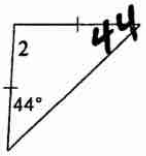
$46+10x+14=180$

$60+10x=180$

$10x=120$

$x=12$

2) $m\angle 2 = 15x + 2$



$44+44+15x+2=180$

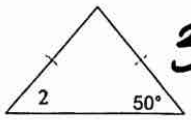
$88+15x+2=180$

$90+15x=180$

$15x=90$

$x=6$

3) $m\angle 2 = 3x + 17$

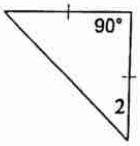


$3x+17=50$

$3x=33$

$x=11$

4) $m\angle 2 = 4x + 5$



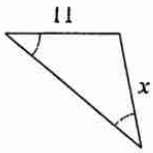
$180-90=90$

$4x+5=45$

$4x=40$

$x=10$

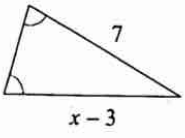
5)



$x+4=11$

$x=7$

6)

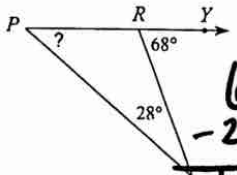


$7=x-3$

$x=10$

Find the measure of each angle indicated.

7)

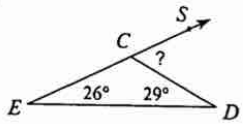


$68=x+28$

-28

$40=x$

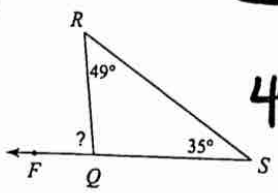
8)



$26+29=x$

$55=x$

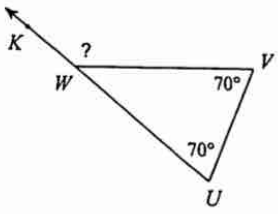
9)



$49+35=x$

$84=x$

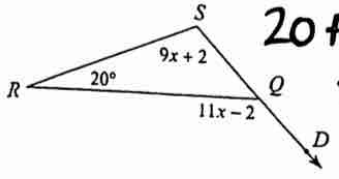
10)



$x=140$

Solve for x.

11)



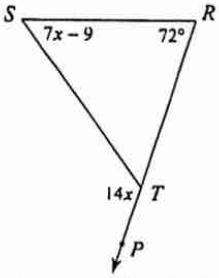
$20+9x+2=11x-2$

$22+9x=11x-2$

$24=2x$

$x=12$

12)



$7x-9+72=14x$

$7x+63=14x$

$-7x$

$\frac{63}{7}=\frac{7x}{7}$

$x=9$