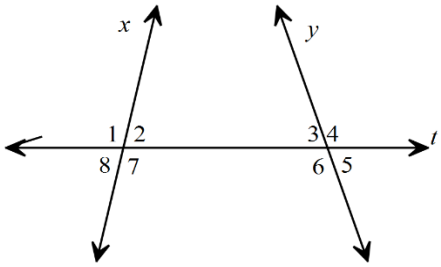
SM2H

Name:_____ Period:_____

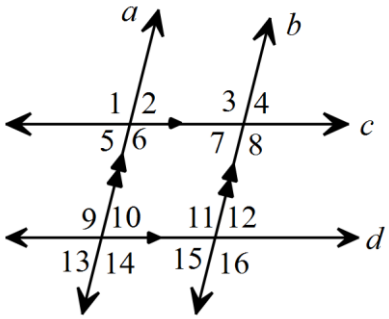
7.2 Parallel Lines and Angle Relationships

In the diagram, *t* is the transversal of *x* and *y*.



1. Name all the exterior angles: _____
2. Name all the interior angles: _____
3. Name 2 pairs of alternate interior angles: _____
4. Name 2 pairs of same side interior angles: _____
5. Name 4 pairs of corresponding angels: _____

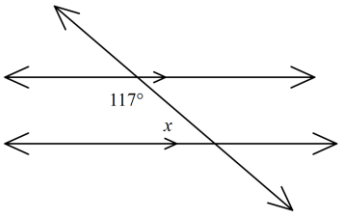
Classify each pair of angles as alternate interior angles, alternate exterior angles, same-side interior angles, corresponding angles, vertical angles, linear pair, or no relationship.



6. ∠ 2 and ∠ 4 _____
7. ∠ 7 and ∠ 12 _____
8. ∠ 1 and ∠ 14 _____
9. ∠ 5 and ∠ 6 _____
10. ∠ 11 and ∠ 15 _____
11. ∠ 2 and ∠ 7_____
12. ∠ 3 and ∠ 11 _____ 13. ∠ 8 and ∠ 12 _____
14. ∠ 7 and ∠ 10 _____ 15. ∠11 and ∠16_____
16. Name the seven angles that must be congruent to ∠ 1 _____
17. Name the eight angles that must be supplementary to ∠ 6 _____
18. If the measure of ∠ 2 = 75°, what are the measure of the other numbered angles?

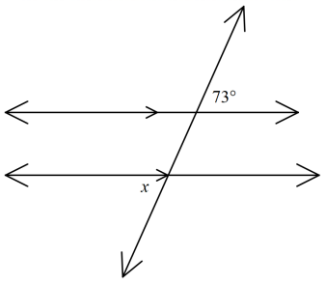
Set up an equation and solve to find the measure of each angle indicated. State the theorem used to set up your equation.

19.



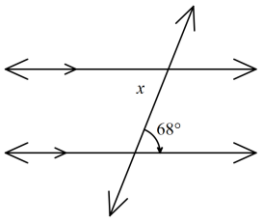
Equation	Theorem/Reason
X=_____	

20.



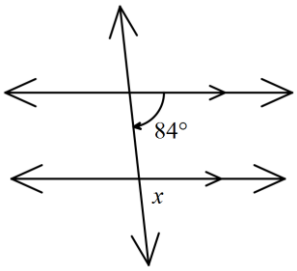
Equation	*Theorem/Reason*
X=_____	

21.



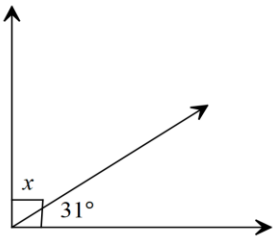
Equation	Theorem/Reason
X=_____	

22.



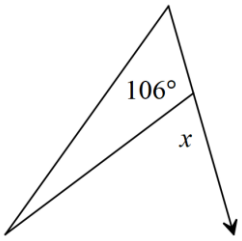
Equation	Theorem/Reason
X=_____	

23.



Equation	Theorem/Reason
X=_____	

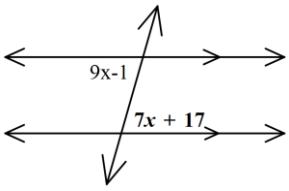
24.



Equation	Theorem/Reason
X=_____	

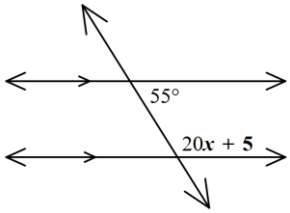
Set up an equation to **solve for x and find the angle measure(s)**. State the theorem used to set up your equation.

25.



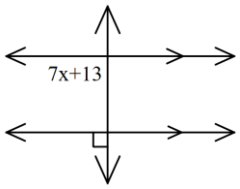
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

26.



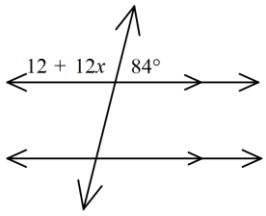
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

27.



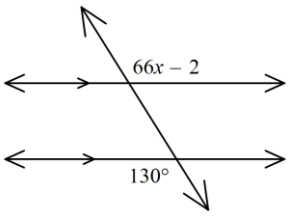
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

28.



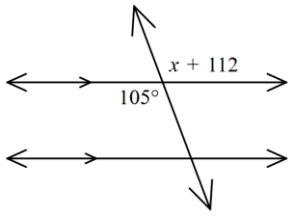
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

29.



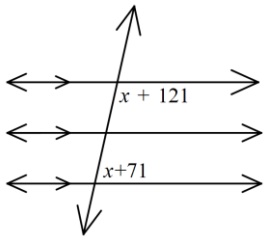
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

30.



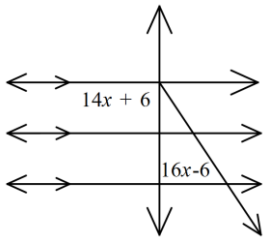
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

31.



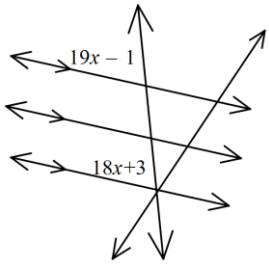
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

32.



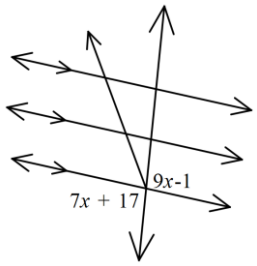
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

33.



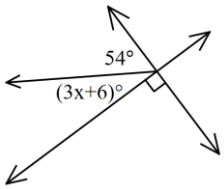
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

34.



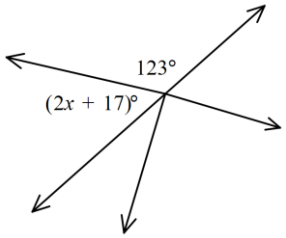
Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

35.



Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

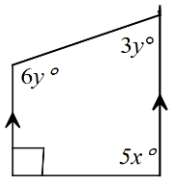
36.



Equation/Work	Theorem/Reason
X=_____ Angle Measure(s): _____	

Find the values of x and y. Show all work!

37.



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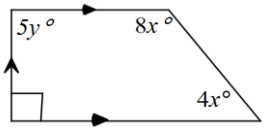

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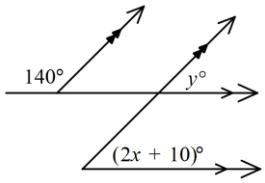

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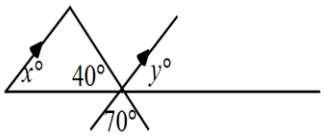

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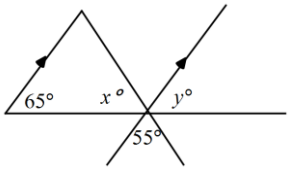
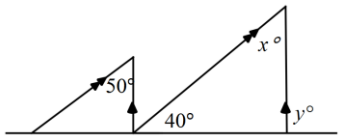


42.



Find the values of x, y, and z. Show all work!

43.

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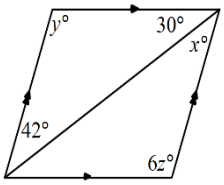
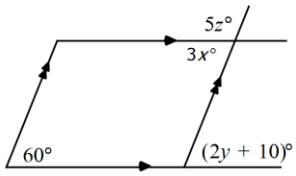
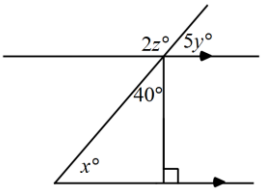


44.



45.