Name: _____ Period: _____ Date: _____

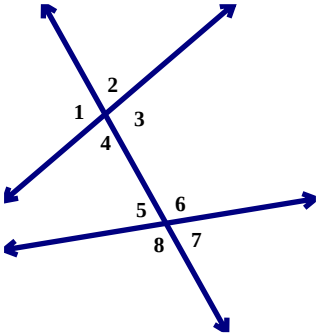
Int 2 Acc | **Homework 1-3** | **Unit 1**

Solving with Parallel Lines & Transversals

Classify each pair of angles as *alternate interior, alternate exterior, consecutive interior, corresponding, vertical,* or *neither*. Then identify if the angle pair is supplementary or congruent (or neither).

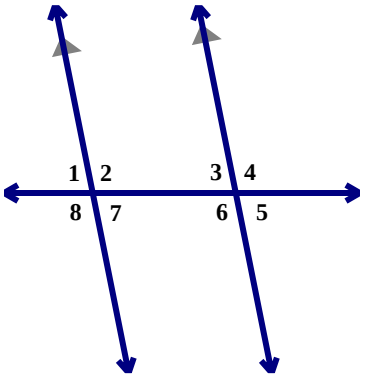
1. ∠1 & ∠5

2. ∠3 & ∠5



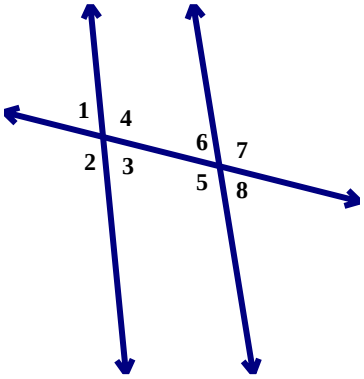
3. ∠2 & ∠3

4. ∠4 & ∠8



5. ∠2 & ∠5

6. ∠1 & ∠4

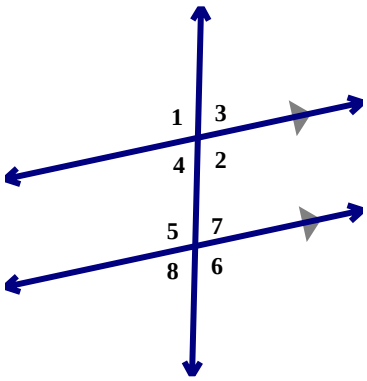


Classify each pair of angles as *alternate interior, alternate exterior, consecutive interior, corresponding, vertical,* or *neither*. Then identify if the angle pair is supplementary or congruent (or neither).

7. ∠5 & ∠6

8. ∠3 & ∠8

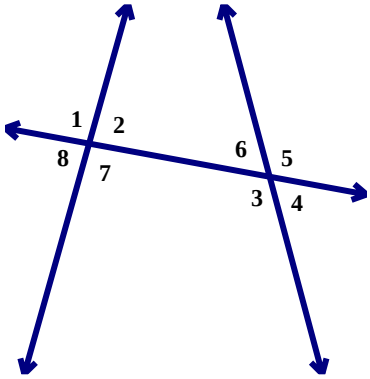
9. ∠2 & ∠4



10. ∠8 & ∠3

11. ∠4 & ∠6

12. ∠7 & ∠3

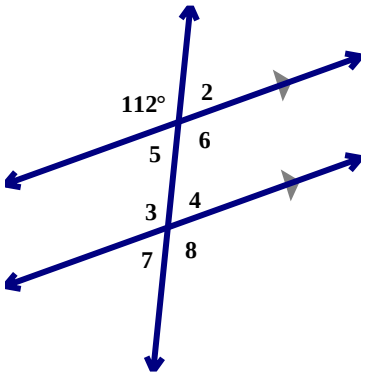


Find the indicated angle measure. (There MAY not be enough information to find the value.)

13. $m\angle 6$

14. $m\angle 3$

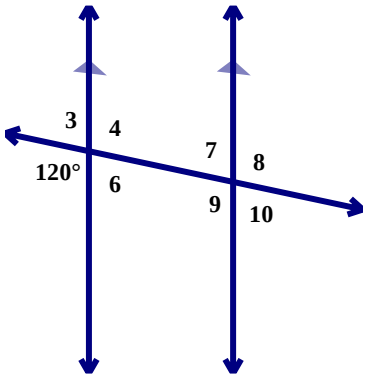
15. $m\angle 4$



19. $m\angle 10$

20. $m\angle 8$

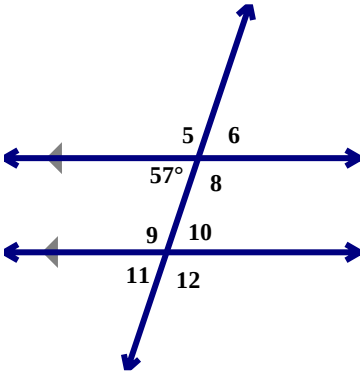
21. $m\angle 4$



16. $m\angle 5$

17. $m\angle 6$

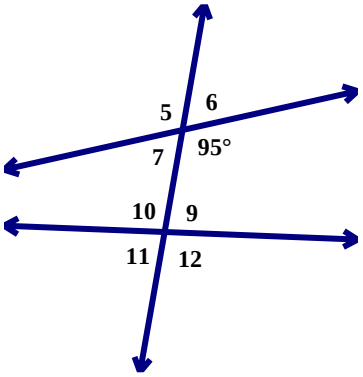
18. $m\angle 11$



22. $m\angle 7$

23. $m\angle 5$

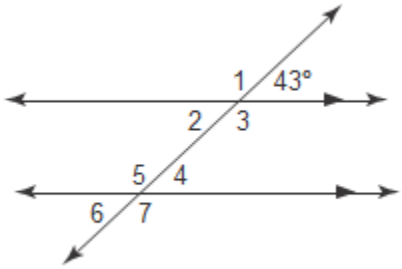
24. $m\angle 12$



For problems 25 & 26, use the figure at the right.

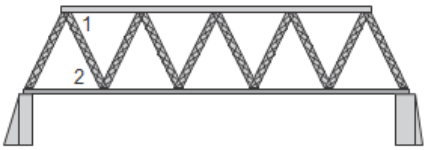
25. List all the angles congruent to the given angle.

26. List all the angles congruent to $\angle 5$.

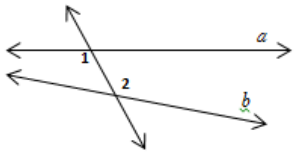


27. The symbol below is an equal sign with a slash through it. It is used to represent *not equal to* in math, as in $1 \neq 2$. If $m\angle 1 = 108^\circ$, classify the relationship between $\angle 1$ and $\angle 2$. Then find $m\angle 2$. Assume the equal sign consists of parallel lines.

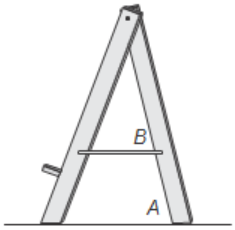
28. Arthur is designing a bridge for science class using parallel supports for the top and bottom beam. Find $m\angle 2$ if $m\angle 1 = 60^\circ$.



29. Line *a* and line *b* are not parallel. Are angle 1 & angle 2 congruent?

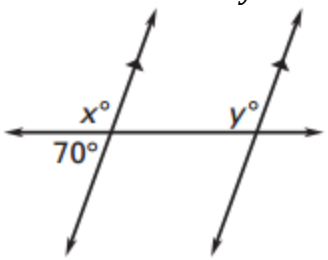


30. The drawing below shows the side view of a drawing easel. The brace is parallel to the ground. If $m\angle A$ is 82°, what is the measure of $\angle B$?

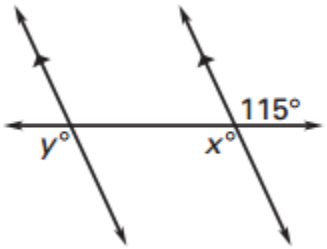


Find the values of *x* and *y*.

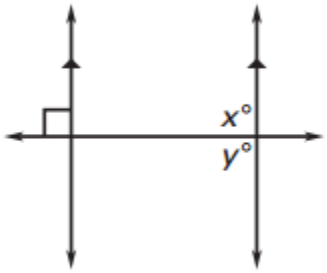
31.



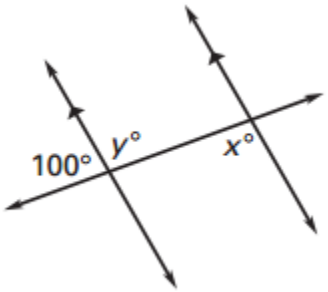
32.



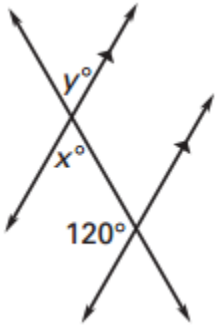
33.



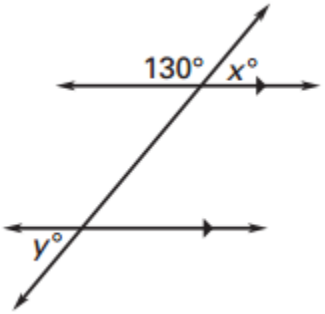
34.



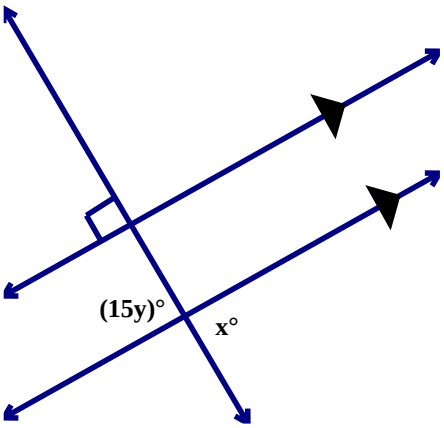
35.



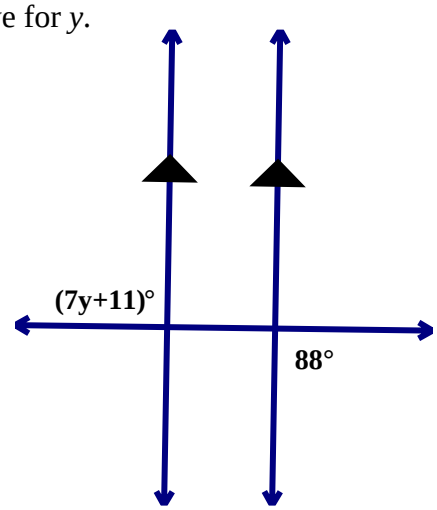
36.



37. Solve for *x* and *y*.

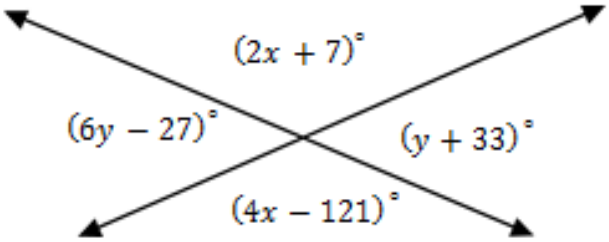


38. Solve for *y*.

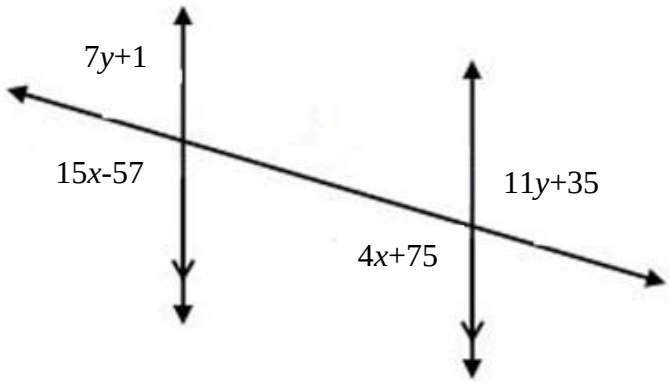


39. Solve for *x* and *y*.

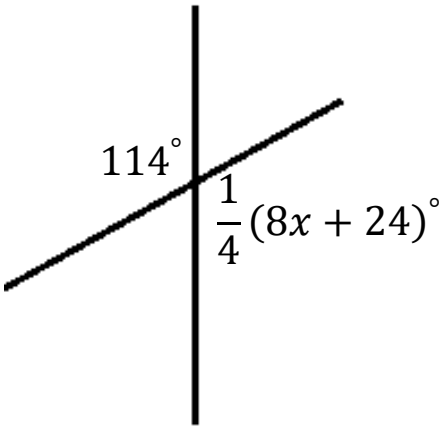
.



40. Solve for *x* and *y*.



41. Solve for *x*.



42. Solve for *x*.