Name _____ **Date** _____

Assignment 6 LESSON 1.5 Show all work for full credit.

∠1 and ∠2 are complementary angles and ∠2 and ∠3 are supplementary angles. Given the measure of ∠1, find *m*∠2 and *m*∠3.

1. $m\angle 1 = 43°$

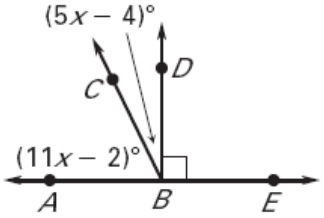
2. $m\angle 1 = 28°$

3. $m\angle 1 = 69.5°$

4. $m\angle 1 = 17.5°$

Find *m*∠*ABC* and *m*∠*CBD*.

5.



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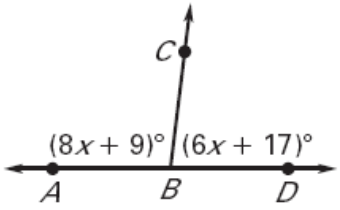
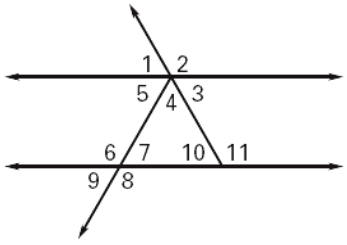


In Exercises 7–10, use the diagram. Tell whether the angles are *vertical angles*, a *linear pair*, or *neither*.



7. ∠1 and ∠2

8. ∠1 and ∠3

9. ∠2 and ∠4

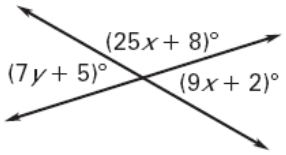
10. ∠4 and ∠5

11. The measure of one angle is 7 times the measure of its complement. Find the measure of each angle.

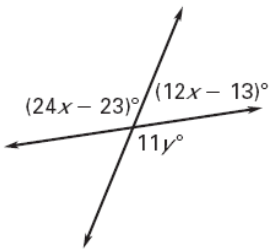
12. Two angles form a linear pair. The measure of one angle is 15 times the measure of the other angle. Find the measure of each angle.

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

13.



14.



Tell whether the statement is *always*, *sometimes*, or *never* true. *Explain* your reasoning.

15. Two vertical angles are adjacent.

16. Two supplementary angles consist of one acute angle and one obtuse angle.

17. An angle that has a complement also has a supplement.

∠*A* and ∠*B* are complementary angles. Find *m*∠*A* and *m*∠*B*.

18. $m\angle A = 5x°$
$m\angle B = (17x + 2)°$

19. $m\angle A = (16x - 13)°$
$m\angle B = (2x - 5)°$

∠*A* and ∠*B* are supplementary angles. Find *m*∠*A* and *m*∠*B*.

20. $m\angle A = (x + 11)°$
$m\angle B = (x - 15)°$

21. $m\angle A = (9x - 12)°$
$m\angle B = (24x + 60)°$