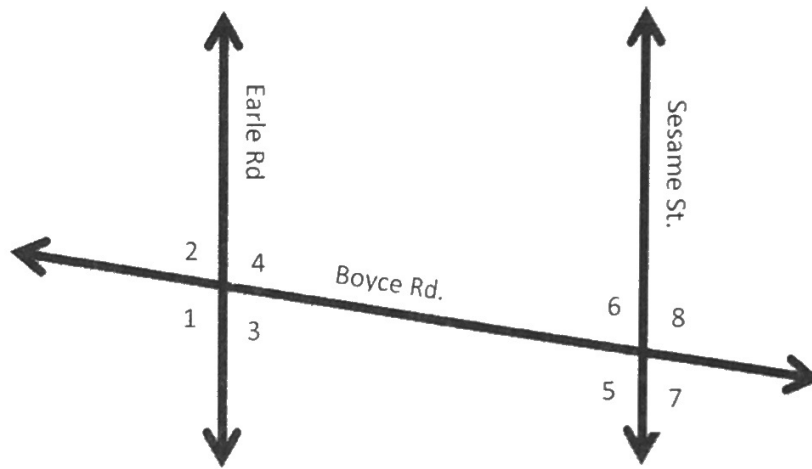Name: _____ Date: _____

Standard: Parallel Lines Cut by a Transversal

1. The following image shows two parallel roads that are cut by a transversal. Which are the two parallel roads, and which is the transversal?

Parallel:

_____

_____

Transversal:

_____

Using the image above, name multiple pairs of each of the following angles.

2. Vertical Angles: ∠____ and ∠____   ∠____ and ∠____   ∠____ and ∠____

3. Corresponding Angles: ∠____ and ∠____   ∠____ and ∠____   ∠____ and ∠____

4. Alternate Exterior Angles: ∠____ and ∠____   ∠____ and ∠____

5. Linear Pair: ∠____ and ∠____   ∠____ and ∠____   ∠____ and ∠____

6. Same-side Interior Angles: ∠____ and ∠____   ∠____ and ∠____

7. Same-side Exterior Angles: ∠____ and ∠____   ∠____ and ∠____

8. Alternate Interior Angles: ∠____ and ∠____   ∠____ and ∠____

Tell whether each pair of angles are either **supplementary** or **congruent**. Circle your answer.

9. Alternate Exterior Angles: supplementary   congruent

10. Same-side Interior Angles: supplementary   congruent

11. Vertical Angles: supplementary   congruent

12. Alternate Interior Angles: supplementary   congruent

13. Corresponding Angles: supplementary   congruent

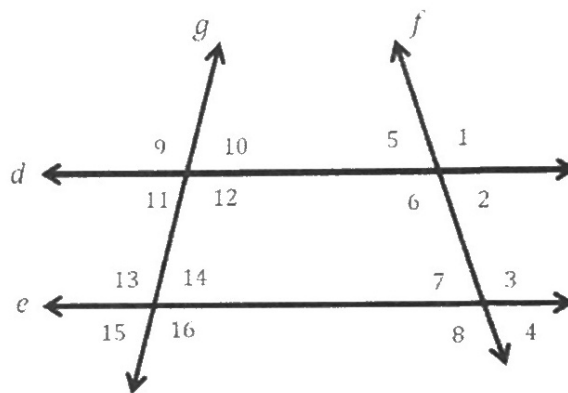14. Linear Pairs: supplementary   congruent

15. What does supplementary mean?

16. What does congruent mean?

Find the measure of ALL of the angles given $m\angle 1 = 120°$ and $m\angle 11 = 45°$.

17. $m\angle 1 =$ _____, $m\angle 2 =$ _____, $m\angle 3 =$ _____,

$m\angle 4 =$ _____, $m\angle 5=$ _____, $m\angle 6 =$ _____, $m\angle 7 =$ _____,

$m\angle 8 =$ _____

18. $m\angle 9 =$ _____, $m\angle 10 =$ _____, $m\angle 11 =$ _____,

$m\angle 12 =$ _____, $m\angle 13=$ _____, $m\angle 14 =$ _____,

$m\angle 15 =$ _____, $m\angle 16 =$ _____

Find the measure of ALL of the angles given $m\angle 2 = 67°$ and $m\angle 9 = 115°$.

18. $m\angle 1 =$ _____, $m\angle 2 =$ _____, $m\angle 3 =$ _____,

$m\angle 4 =$ _____, $m\angle 5=$ _____, $m\angle 6 =$ _____, $m\angle 7 =$ _____,

$m\angle 8 =$ _____

19. $m\angle 9 =$ _____, $m\angle 10 =$ _____, $m\angle 11 =$ _____,

$m\angle 12 =$ _____, $m\angle 13=$ _____, $m\angle 14 =$ _____,

$m\angle 15 =$ _____, $m\angle 16 =$ _____
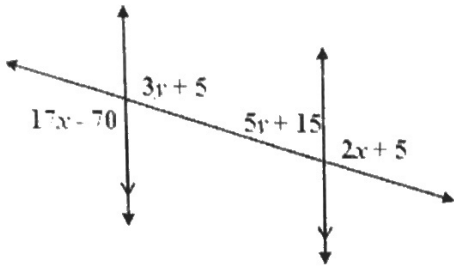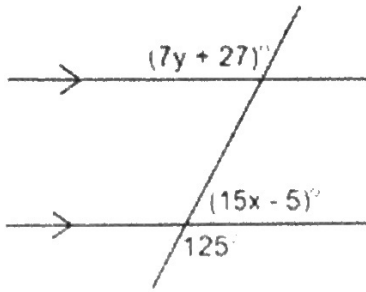

20. Which way is the correct setup?

A. 12x + 3 + 11x + 9 = 180

B. 12x + 3 = 11x + 9

C. 12x + 3 + 11x + 9 = 90

21. Which way is the correct setup for BOTH?

3x + 5
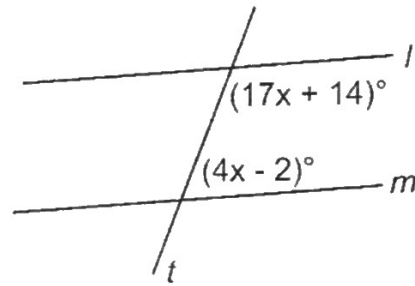
17x - 70

5x + 15

2x + 5

A. 17x – 70 = 2x + 5 and 3y + 5 = 5y + 15

B. 17x – 70 + 2x + 5 = 180 and 3y + 5 = 5y + 15

C. 17x – 70 = 2x + 5 and 3y + 5 + 5y + 15 = 180

C. 17x – 70 + 2x + 5 = 180 and 3y + 5 + 5y + 15 = 180

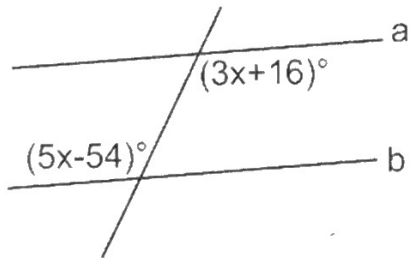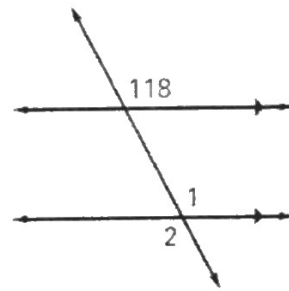22. Solve for x and y.

(7y + 27)°

(15x - 5)°

125

23. Solve for x.

(17x + 14)°

(4x - 2)°

l

m

t

24. Solve for x.

(3x+16)°

(5x-54)°

a

b

25. Find the measures of Angle 1 and 2.

118

1

2

Word Problem

26. A set of stairs intersects the first floor and the basement of a house at the angles given in the diagram. Find the angle that the stairs forms with the first floor.

First Floor

6x - 42

?

2x + 14

Basement