Geometry   **Problem Set #7**   **Name:**_____

                                                                 Period:_____

1. Describe the difference between skew lines and parallel lines.

2. Give a counter-example for the following statement: All months have 31 days.
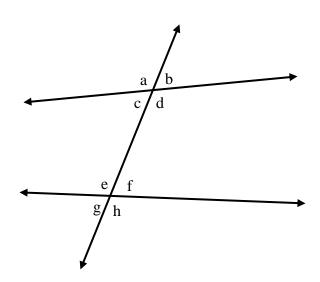
Fill in the blank.

3. _____ lines meet to form right angles.

4. A _____is a third line that intersects two or more given lines.

5. Lines that do not intersect and are coplanar are called _____ lines.

Answer the following.

6. a) What does the symbol "⊥" mean?

     b) What does the symbol "//" mean?

7-14: Name each pair of angles. Choose from linear pair, corresponding, vertical, alternate interior, alternate exterior, same-side interior, or same-side exterior. If no relationship, write none.

7. ∠a and ∠g

8. ∠a and ∠h

9. ∠c and ∠b

10. ∠d and ∠g

11. ∠c and ∠e

12. ∠a and ∠b

13. ∠d and ∠e

14. ∠b and ∠f

In problems 15-16 solve system by method of choice (substitution or elimination). Write the solutions as an ordered pair.

15.
$$x - 2y = 0$$
$$3x - 5y = 8$$

16.
$$2x - 3y = 8$$
$$x = y + 3$$

17. **Factor** $3x^2 + 7x + 4$

18. **Solve** $2x^2 + 5x = 3$

19. Rewrite the biconditional statement as two conditional statements.
I will go to the dance if and only if you buy me the blue dress.

20. Write the inverse and converse of the following statement.
If a triangle has three congruent sides, then the triangle is equilateral.

Inverse:_____

Converse:_____

21-*23.* *Use the diagram to find the measure of each angle. Given a // b.*

21. $m\angle c$
_____(2)

22. $m\angle d$
_____(2)

23. $m\angle e$
_____(2)

103° c a

d e b