

NAME: _____ PERIOD: _____ DATE: _____

Identify each statement as (T) rue or (F)alse. (2 Points Each).

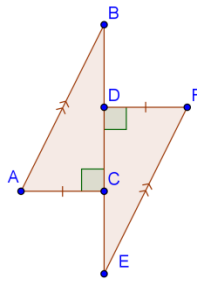
1. ____ If two triangles are congruent then at least two angles and one side must be congruent.
2. ____ The line through points $(-2, 5)$ and $(-3, 2)$ is parallel to the line $y = 3x + 7$.
3. ____ A right triangle can be isosceles.
4. ____ If $A \perp B$ and $B \perp C$ then $A \parallel C$.
5. ____ If the base angles of an isosceles triangle are complementary, then the triangle cannot be obtuse.
6. ____ If $\triangle ABC \cong \triangle DEF$, then $\angle E \cong \angle B$.
7. ____ If the corresponding sides of two triangles are congruent then the triangles must be congruent.
8. ____ If two angles of a triangle are complementary, then the remaining angle is a right angle.
9. ____ The line $2y = x + 5$ is perpendicular to the line $6x + 3y = 8$.
10. ____ The sum of the lengths of any two sides of a triangle is always greater than the length of the third side.

From the given diagram, determine which triangles, if any, are congruent. State the congruence conjecture that supports your answer. If the triangles cannot be shown to be congruent from the information given, write "CBD" (Cannot be Determined). (6 Points Each)

11. $\triangle ABC \cong \triangle$ _____
 Conjecture: _____

12. $\triangle ABC \cong \triangle$ _____
 Conjecture: _____

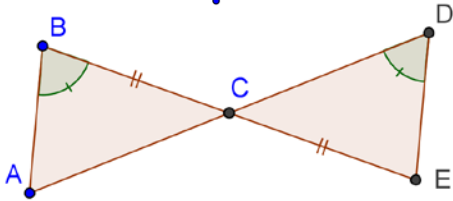
13.



$\triangle ABC \cong \triangle$ _____

Conjecture: _____

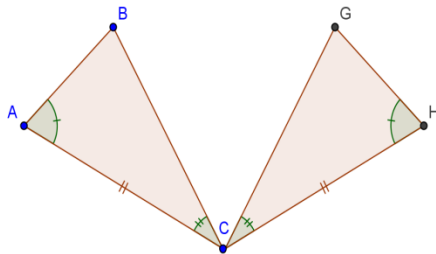
14.



$\triangle ABC \cong \triangle$ _____

Conjecture: _____

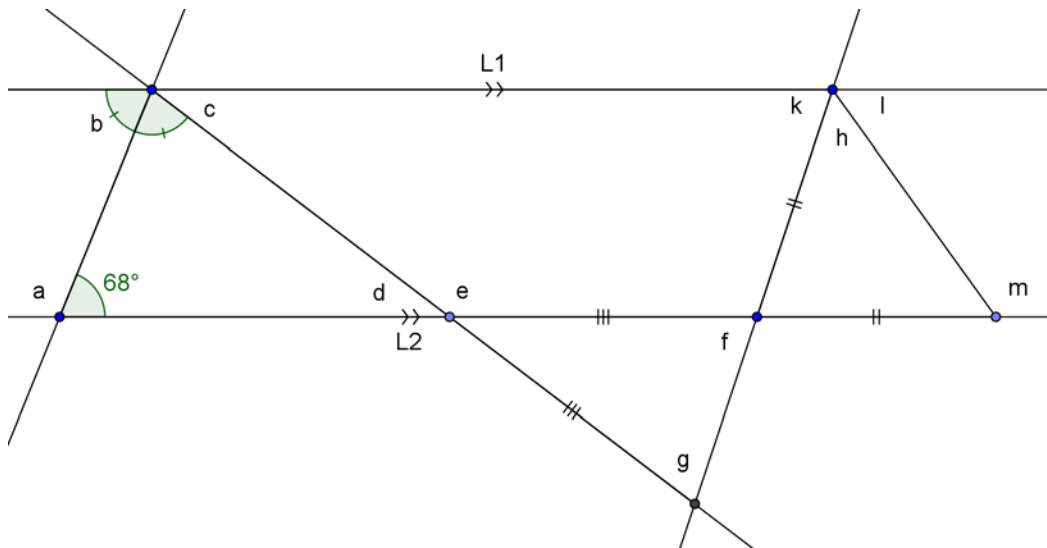
15.



$\triangle ABC \cong \triangle$ _____

Conjecture: _____

16. Find the measure of each lettered angle in the figure below. (10 Points)



a. _____

e. _____

k. _____

b. _____

f. _____

l. _____

c. _____

g. _____

m. _____

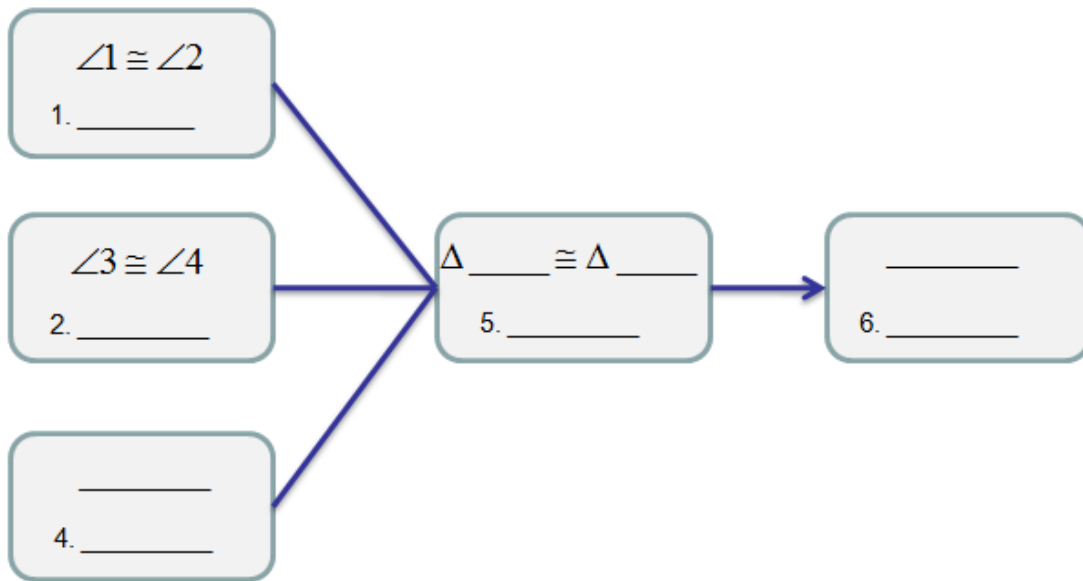
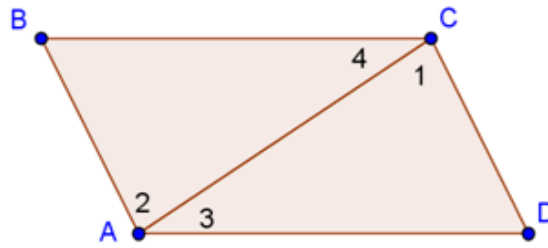
d. _____

h. _____

17. Fill in the blanks for each step in the flow chart proof below. (10 Points)

Given: $\angle 1 \cong \angle 2$
 $\angle 3 \cong \angle 4$

Show: $\overline{AB} \cong \overline{CD}$



18. Find the slope and y-intercept for the line $6x - 3y = 9$. (10 Points)

19. Find the equation of the line through the point (1,1) with $slope = \frac{2}{3}$. (10 Points)

20. Find the point of intersection for the two lines $2y = 4x + 8$ and $y = x + 5$. (10 Points)

Identify the Degree of each term.

21. $3x^2$ _____

24. $9xyz$ _____

22. $-st^2$ _____

25. $3x^2y^2z^3$ _____

23. 9 _____

26. $-9x$ _____

Perform the indicated operation with the Polynomials. Write answers in Standard Form.

27. $(-x^2 + 2x + 3) + (3x - 4)$ _____

28. $(-5x^4 + x^2) - (x^3 + 8x^2 - x)$ _____

29. $(y^3 - y^2 + y) \cdot (2y^2 + 3y)$ _____

30. $(x^2 + 1)(x^2 - 1)$ _____

31. $(x^2 - 4x + 3) \div (x - 1)$ _____