

NAME: _____ PERIOD: _____ DATE: _____

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

1. ____ If the corresponding sides of two triangles are congruent then the triangles are congruent.
2. ____ The line through points (-2, 5) and (3, 5) is parallel to the line $y = x + 7$.
3. ____ A right triangle can be equilateral.
4. ____ If $A \parallel B$ and $B \perp C$ then $A \parallel C$.
5. ____ If the base angles of an isosceles triangle are both acute, then the triangle cannot be obtuse.
6. ____ If $\triangle ABC \cong \triangle DEF$, then $\angle BCA \cong \angle FDE$.
7. ____ If the corresponding angles of two triangles are congruent then the triangles must be congruent.
8. ____ If two angles of a triangle are congruent, then at least two sides of the triangle must be congruent.
9. ____ The line $y = 2x + 5$ is perpendicular to the line $x + 2y = 4$.
10. ____ If the sum of the lengths of any two sides of a triangle is 14 inches, then the length of the third side must be greater than 14 inches.

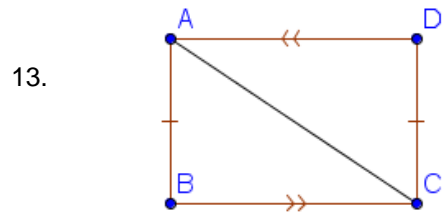
From the given diagram, determine which triangles, if any, are congruent. State the congruence conjecture that supports your answer. If the triangles cannot be shown to be congruent from the information given, write "CBD" (Cannot be Determined). (6 Points Each)

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

Conjecture: _____

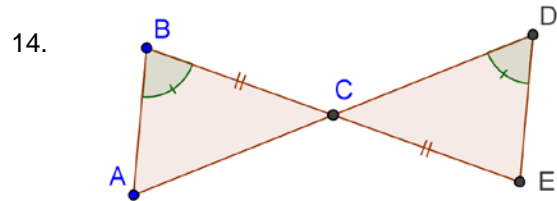
12.  $\triangle ABC \cong \triangle$ _____

Conjecture: _____



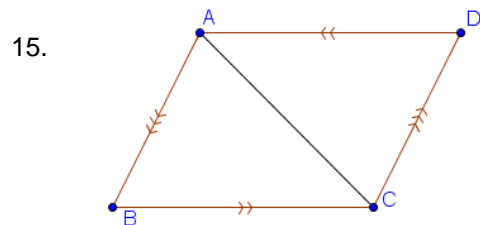
$\triangle ABC \cong \triangle$ _____

Conjecture: _____



$\triangle ABC \cong \triangle$ _____

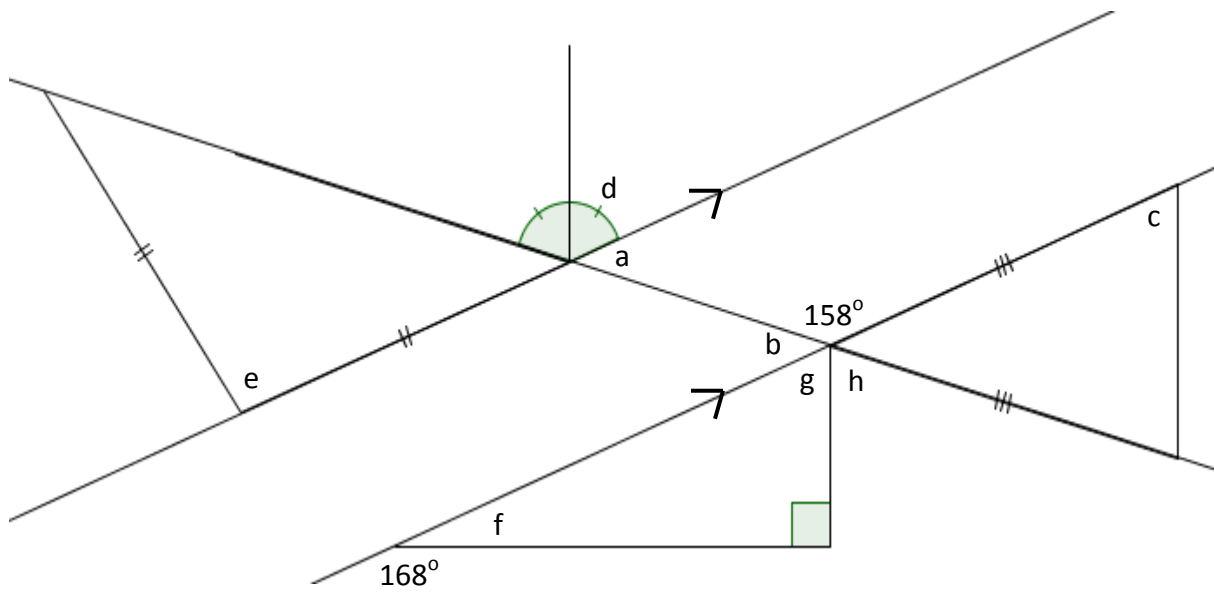
Conjecture: _____



$\triangle ABC \cong \triangle$ _____

Conjecture: _____

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



a. _____

e. _____

b. _____

f. _____

c. _____

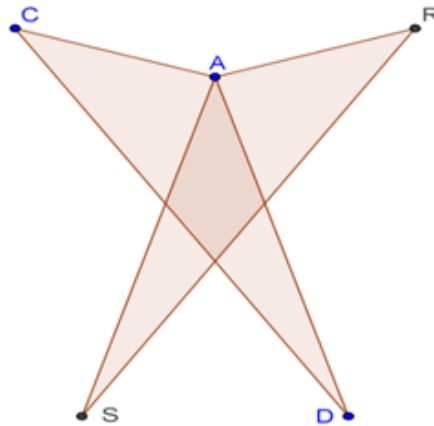
g. _____

d. _____

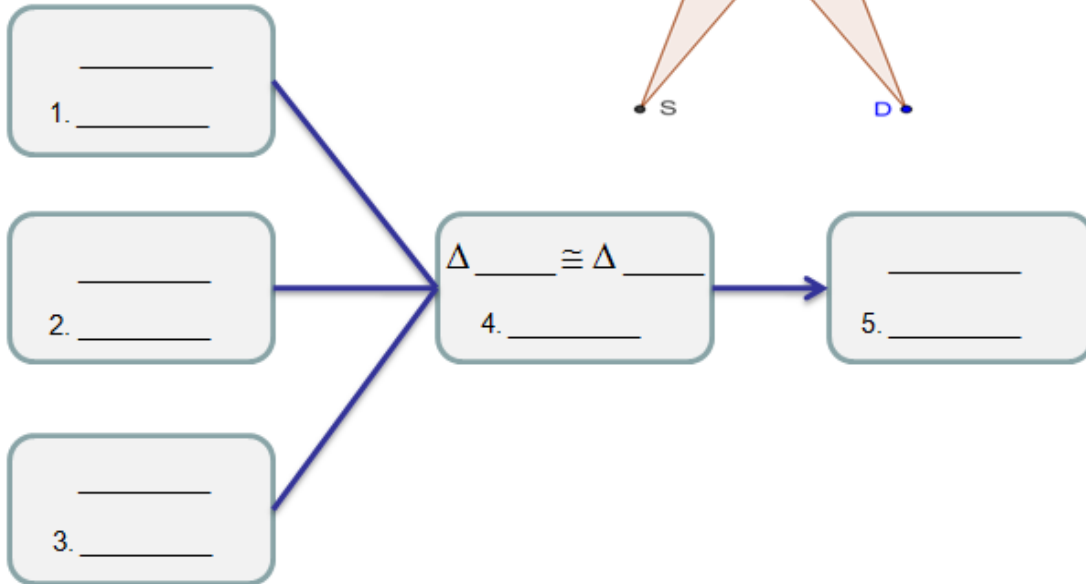
h. _____

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

Given: $\angle S \cong \angle D$
 $\angle C \cong \angle R$
 $\overline{CA} \cong \overline{AR}$



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



18. Find the slope and y-intercept for the line $8x - 2y = 12$. (10 Points)

19. Find the equation of the line through the point $(3,2)$ with $slope = \frac{3}{4}$. (10 Points)

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

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

21. $(-x^2 + 2x + 3) + (3x - 4)$

22. $(-5x^4 + x^2) - (x^3 + 8x^2 - x)$

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

24. $(x^2 + 1)^2 - (4x + 4)$

25. $(x + 2)^2 \cdot (x + 1)$

26. $(x^3 + 5x^2 + 8x + 4) \div (x + 1)$

27. The difference of the answers from problems #21 and #22 (#21 - #22).
