

From the diagram on the right,	
1. Name a ray. _____	
2. Name a line. _____	
3. Name the smallest angle. _____	
4. Name a segment. _____	

For each problem, point S is between points A and E. Sketch a figure for each problem in the space provided and find the missing measure.

5. $SA = 5$; $ES = 10$; $AE =$ _____	
6. $AE = 75$; $SA = 25$; $ES =$ _____	

$AC = BD$; $BC = 4$; $CD = 7$ 7. Find AC. $AC =$ _____	
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8. If $m\angle BAT = 32^\circ$ and $m\angle BAD = 54^\circ$ Then $m\angle DAT =$ _____ ^o	
9. $m\angle BAT = (x+6)^\circ$; $m\angle DAT = (2x - 6)^\circ$ and \overline{AT} bisects $\angle BAD$. Find x and $m\angle BAT$. $x =$ _____ $m\angle BAT =$ _____	

10. Sketch the next step in this construction and describe what you are constructing.

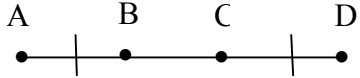
11. Luke attempted to construct a perpendicular bisector but does not know what he is doing wrong. What does he need to do differently?

Use the statement: An equilateral triangle has three congruent sides. Circle the truth value of each.

12. Write it as a conditional.	T or F ?
13. Write the converse.	T or F ?
14. Write the inverse.	T or F ?
15. Write the contrapositive.	T or F ?
16. Write the Biconditional.	T or F ?

17. Put the following statements into a logical chain on the right side.

Dogs bark \square Pigeons fly	
Switch on \square Room is bright	
Room is bright \square Children wake	
Children wake \square dogs bark	

<p>18. Prove the segment overlap theorem. Given: $AB = CD$ Prove: $AC = BD$</p> 		Statements	Reasons
	1.		
	2.	+ = AC	Segment Addition Postulate
	3.	+ = BD	Segment Addition Postulate
	4.		
	5.		
	6.		

Complete with Always, Sometimes, or Never.

1. Skew lines ___?___ intersect. (Skew lines do not lie in the same plane.)	1.	Always	Sometimes	Never
2. Two lines that are not coplanar ___?___ intersect.	2.	Always	Sometimes	Never
3. If two angles are supplementary, then they are ___?___ adjacent angles.	3.	Always	Sometimes	Never
4. Four points are ___?___ coplanar.	4.	Always	Sometimes	Never
5. Angles that form a linear pair are ___?___ supplementary.	5.	Always	Sometimes	Never
6. Two non-Zero Angles that are Complementary are ___?___ both acute.	6.	Always	Sometimes	Never
7. A conclusion based on inductive reasoning is ___?___ true.	7.	Always	Sometimes	Never
8. If two angles have the same measure then they are ___?___ congruent.	8.	Always	Sometimes	Never
9. Opposite rays are ___?___ collinear.	9.	Always	Sometimes	Never
10. When making a geometry construction, using a protractor is ___?___ allowed.	10.	Always	Sometimes	Never
11. A point that lies on the perpendicular bisector of a segment is ___?___ equidistant from the endpoints of the segment.	11.	Always	Sometimes	Never
12. If a conditional is true, then its converse is ___?___ true.	12.	Always	Sometimes	Never
13. A good definition can ___?___ be written in the form of a valid biconditional.	13.	Always	Sometimes	Never
14. The bisector of a segment is ___?___ perpendicular to the segment.	14.	Always	Sometimes	Never
15. If a triangle is isosceles, then it is ___?___ a right triangle.	15.	Always	Sometimes	Never
16. If a triangle is obtuse, then it is ___?___ a right triangle.	16.	Always	Sometimes	Never
17. If a triangle is equilateral, then it is ___?___ a right triangle.	17.	Always	Sometimes	Never
18. The statement $CD \square 4\text{cm}$ is ___?___ a proper use of notation.	18.	Always	Sometimes	Never