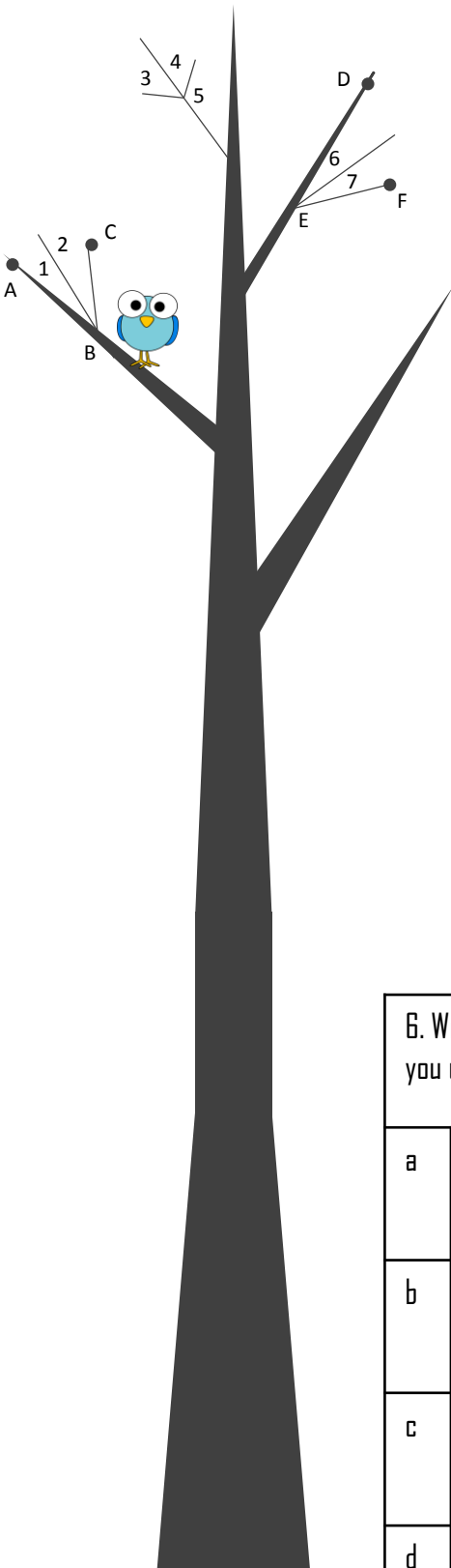


SEGMENT ADDITION POSTULATE AND ANGLE ADDITION POSTULATE

Name: _____

Date: _____ Class: _____



- Given that the distance from the ground to the lowest branch is 39 meters and the distance from the ground to the branch with the bird is 46 meters, find the distance between the lowest branch and the branch with the bird.
- Given that the distance from the branch with the bird to the top of the tree is 15 meters, find the height of the tree.
- Given that the measure of angle 1 is 28 degrees and the measure of angle 2 is 55 degrees, find the measure of angle ABC.
- Given that the measure of angle DEF is 62 degrees and angle 6 is congruent to angle 7, find the measure of angle 6.
- Given that the measure of angle 3 is 23 degrees, the measure of angle 5 is 134 degrees, and the measure of the large angle made up of all three angles 3, 4, and 5 is 221 degrees, find the measure of angle 4.

6. Write an equation that can be used to find the requested measure and identify which postulate you used.

a		Find $m\angle MOP$.	Equation: _____	Postulate: _____
b		Find XZ.	Equation: _____	Postulate: _____
c		Find $m\angle AED$.	Equation: _____	Postulate: _____
d		Find SW.	Equation: _____	Postulate: _____

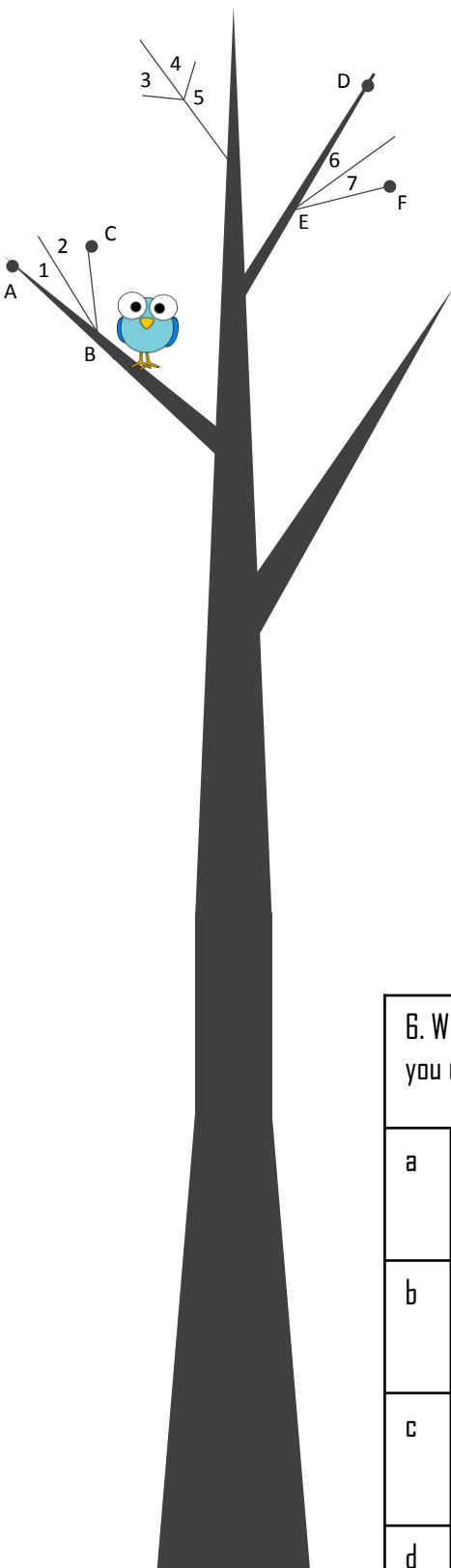


SEGMENT ADDITION POSTULATE AND ANGLE ADDITION POSTULATE

Name: _____

Date: _____ Class: _____

Answer Key



- Given that the distance from the ground to the lowest branch is 39 meters and the distance from the ground to the branch with the bird is 46 meters, find the distance between the lowest branch and the branch with the bird.
7 meters
- Given that the distance from the branch with the bird to the top of the tree is 15 meters, find the height of the tree.
61 meters
- Given that the measure of angle 1 is 28° and the measure of angle 2 is 55° , find the measure of angle ABC.
 83°
- Given that the measure of angle DEF is 62 degrees and angle 6 is congruent to angle 7, find the measure of angle 6.
 31°
- Given that the measure of angle 3 is 23 degrees, the measure of angle 5 is 134 degrees, and the measure of the large angle made up of all three angles 3, 4, and 5 is 221 degrees, find the measure of angle 4.
 64°

6. Write an equation that can be used to find the requested measure and identify which postulate you used.

a		Find $m\angle MOP$.	Equation: $m\angle MON + m\angle NOP = m\angle MOP$	Postulate: Angle Addition Postulate
b		Find XZ.	Equation: $XY + YZ = XZ$	Postulate: Segment Addition Postulate
c		Find $m\angle AED$.	Equation: $m\angle AEB + m\angle BEC + m\angle CED = m\angle AED$	Postulate: Angle Addition Postulate
d		Find SW.	Equation: $ST + TU + UV + VW = SW$	Postulate: Segment Addition Postulate



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