UNIT 1 TEST CHECK LIST

Basics of Geometry

Check	Vocab I need to know	Check	Skills I need to know how to do
	Acute angle Obtuse angle Congruent Complementary angles Supplementary angles Linear pair Vertical angles Perpendicular		• Set up equations based on a picture (i.e., when to set things equal to each other and when to add them together)

Segment and Angle Relationships

Check	Vocab I need to know	Check	Skills I need to know how to do
	Angle Bisector Segment Bisector Midpoint Perpendicular bisector		• Angle addition (piece + piece = whole) • Segment addition (piece + piece = whole) • Set up an equation when something has been bisected (set them equal to each other!)

Parallel Line Relationships

Check	Vocab I need to know	Check	Skills I need to know how to do
	Transversal Alternate exterior angles Alternate interior angles Same side exterior angles Same side interior angles Corresponding angles		• Identify the type of angle from a picture • Set up an equation based on the types of angles (i.e., set them equal vs. add them together)

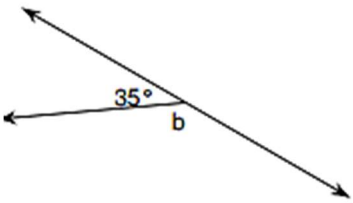
Algebraic Proofs

Check	Vocab I need to know	Check	Skills I need to know how to do
	Addition property Subtraction property Multiplication property Division property Distributive property Reflexive property Symmetric property Substitution property Transitive property Definition of ≅ segments/angles		• Use the properties to fill in the missing steps of a proof.

Station 1—Basics of Geometry

For problems 1-3, name the types of angles (complementary, supplementary, or vertical) and find *b*.

1.



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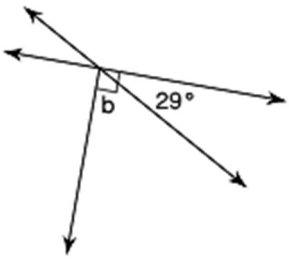

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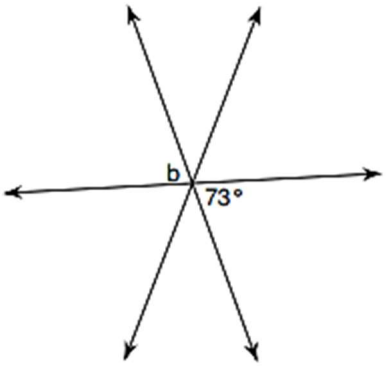
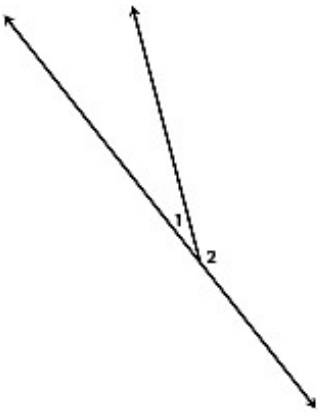
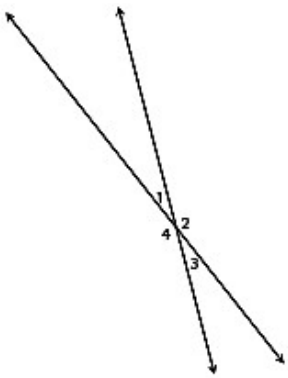


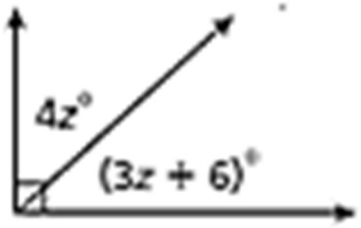
4. In the diagram below, ∠1 and ∠2 are a linear pair. Find m∠1 if m∠1=2x – 9 and m∠2=10x + 9.



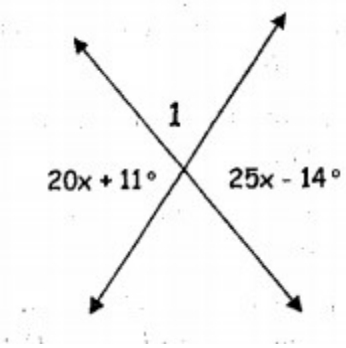
5. Find m∠4 in the diagram below if m∠2 = 8x + 6 and m∠4 = 5x + 21



6. Solve for z.

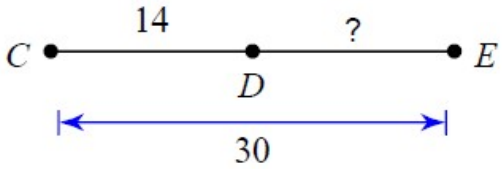


7. Solve for x.



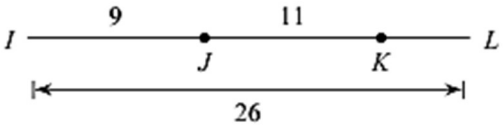
Station 2—Segment and Angle Relationships

1. Find the missing segment length.



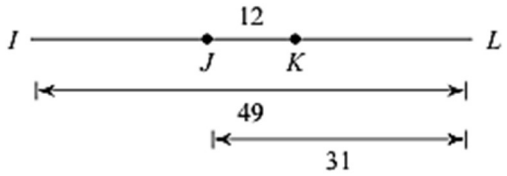
2.

Find KL

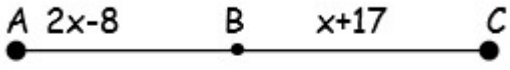


3.

Find IK



4. Given : AC = 39 m

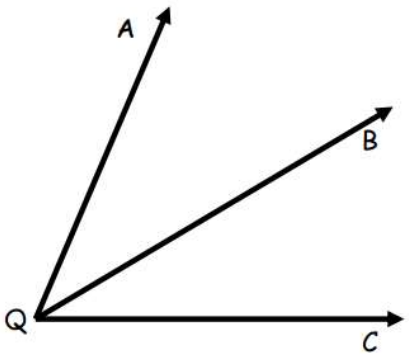


X = _____

AB = _____

BC = _____

5.



QB is the angle bisector of ∠AQC.

m∠AQB = 5x

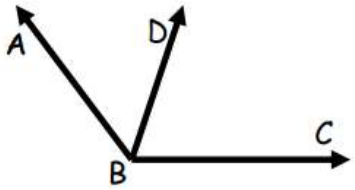
m∠BQC = 8x - 24

Find the following:

x = _____ m∠AQB = _____

m∠BQC = _____ m∠AQC = _____

6.



m∠ABC = 122

m∠ABD = 8x + 20

m∠DBC = 22x - 3

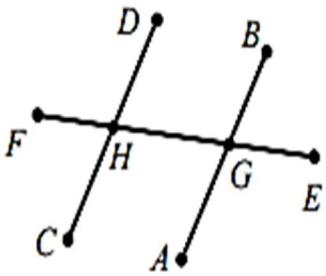
Find the following:

x = _____ m∠ABD = _____

m∠DBC = _____

Station 3—Parallel Line Relationships

For problems 1-5, name the types of angles listed (alt ext, alt int, same side ext, same side int, corresponding)



1. ∠DHG and ∠HGA

2. ∠FHC and ∠DHG

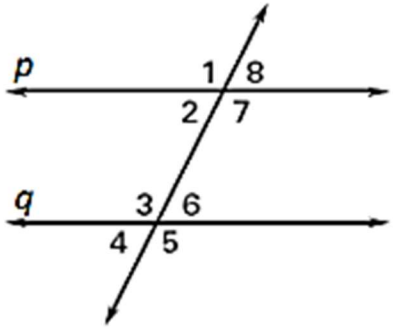
2. ∠BGE and ∠FHC

3. ∠EGA and ∠GHC

4. ∠AGH and ∠EGA

5. ∠DHG and ∠BGH

If $p \parallel q$ and $m\angle 1 = 75°$, find the measures of all the angles formed by the parallel lines cut by the transversal.

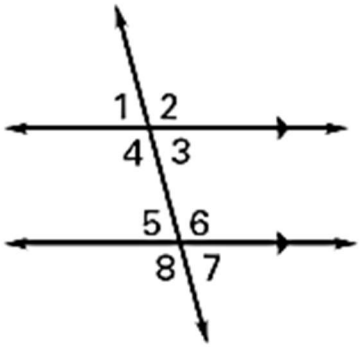


$m\angle 1 =$ $m\angle 2 =$

$m\angle 3 =$ $m\angle 4 =$

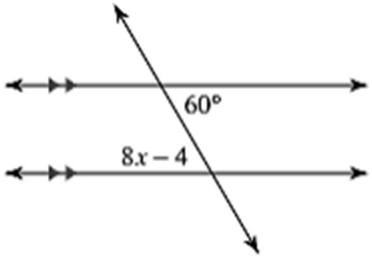
$m\angle 5 =$ $m\angle 6 =$

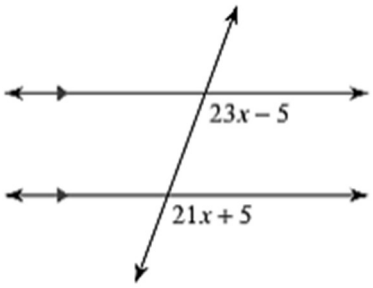
$m\angle 7 =$ $m\angle 8 =$

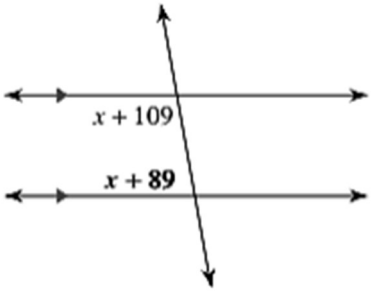


1. If the $m\angle 2 = 113°$, what is the $m\angle 6$?
2. If the $m\angle 4 = 100°$, what is the $m\angle 6$?
4. If the $m\angle 7 = 75°$, what is the $m\angle 1$?
5. If the $m\angle 3 = 81°$, what is the $m\angle 4$?

Name the angle relationship and then solve for x:







Station 4—Algebraic Proofs

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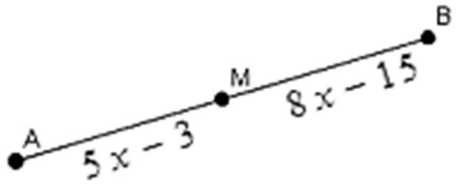
1. Given: M is the midpoint of segment AB.

   Prove: x = 4



	Statements	**Reasons**
1,	M is the midpoint of segment AB.	
2.		Definition of a midpoint
3.		Definition of congruent angles
4.	$5x-3=8x-15$	
5.	$-3=3x-15$	
6.		Addition Property
7.		Division Property
8.	x = 4	

Match the property to each statement (PROPERTIES CAN BE USED MORE THAN ONCE).

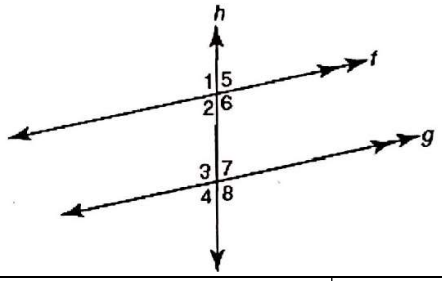
1. _____ If $CD = 15$ and $LM = 15$, then $CD = LM$.
2. _____ If $AB = 3x - 2$ and $x = 2$, then $AB = 4$.
3. _____ $16 = 16$
4. _____ $\angle A = 62°$ and $\angle B = 62°$, so $\angle A = \angle B$.
5. _____ $AB = 2x + 2$ and $DE = 4x - 1$. $AB = DE$ so $2x + 2 = 4x - 1$.
6. _____ $2x + 1 = 6$ and $6 = 2x + 1$.

A. Symmetric Property
B. Reflexive Property
C. Substitution Property
D. Transitive Property

2. Complete the proof.

Given: $f \parallel g$, h is a transversal

Prove: $\angle 1$ and $\angle 4$ are supplementary



Statements	Reasons
1. $f \parallel g$	1.
2. $\angle 1$ *and* $\angle 2$ are linear Pairs	2. Definition of Linear Pairs
3. $\angle 3$ *and* $\angle 4$ are linear pairs	3.
4. $m\angle 1 + m\angle 2 = 180$	4. Linear pairs are supplementary
5.	5.
6. $\angle 1 \cong \angle 3$	6. Corresponding Angle Postulate
7.	7. Definition of Congruent Angles
8.	8. Substitution
9.	9.
10.	10. Definition of Supplementary Angles