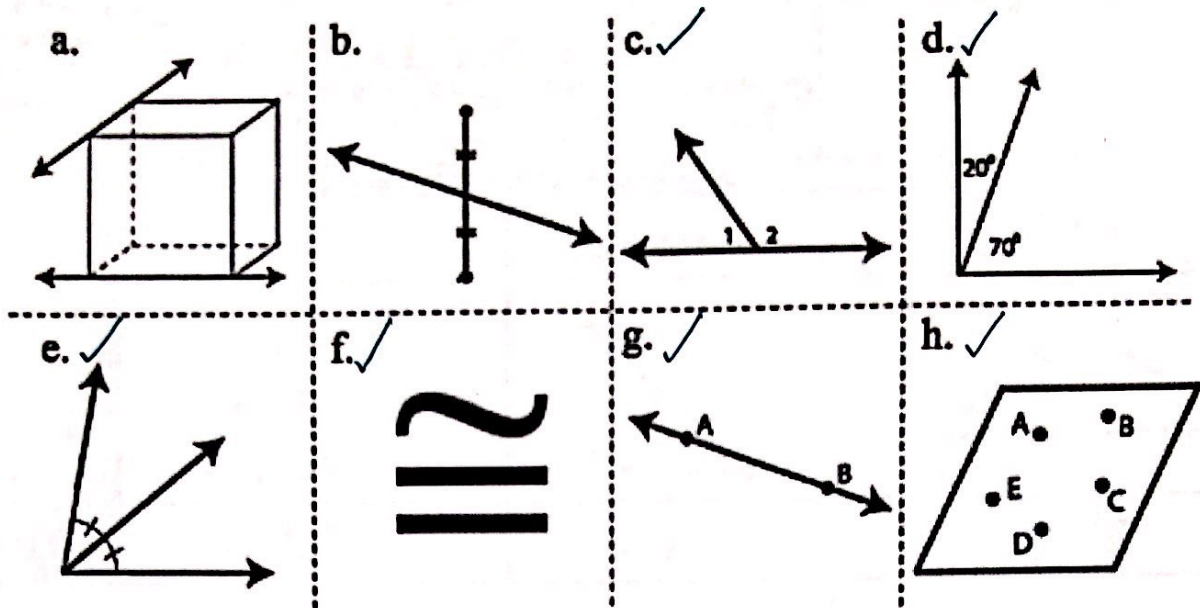


5.1 Intro to Geometric Properties

OBJ: examine the properties of lines and angles.

Directions: Match each of the following pictures with the vocabulary listed below.



1. G Line AB
2. C Linear Pair Angles
3. H Coplanar points
4. F Congruent (Symbol)
5. A Skew lines → don't intersect, not parallel (||)
6. D Complementary 90°
7. B Segment bisector
8. E Angle bisector

Angles

Important Vocabulary		Picture
* Vertical Angles:	two angles that are directly across from each other \cong ex: $\angle 1 + \angle 4$, $\angle 6 + \angle 7$	
* Corresponding Angles:	two angles in the same position on lines \cong ex: $\angle 1 + \angle 5$, $\angle 4 + \angle 8$	
Alternate Interior Angles: \cong	two angles between lines on different sides of transversal \cong ex: $\angle 3 + \angle 6$, $\angle 4 + \angle 5$	
Alternate Exterior angles	two angles outside lines on different sides of transversal \cong ex: $\angle 1 + \angle 8$, $\angle 2 + \angle 7$	

Angles:		
Linear Pair: = 180°	two angles that form a line ex: $\angle 1 + \angle 2$, $\angle 1 + \angle 3$ (supplementary)	
Consecutive Interior Angles (supp)	two angles between ll lines \uparrow on same side of transversal ex: $\angle 3 + \angle 5$, $\angle 4 + \angle 6$	
Consecutive Exterior Angles (supp)	two angles outside ll lines \uparrow on same side of transversal ex: $\angle 1 + \angle 7$, $\angle 2 + \angle 8$	

Directions: Draw and label three types of triangles classified by angles.

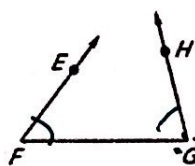
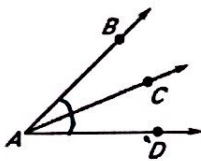
Name:	Acute	Right	Obtuse
Picture:			
Definition:	$< 90^\circ$	$= 90^\circ$	$> 90^\circ$

Directions: Draw and label three types of triangles classified by sides.

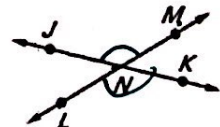
Name:	Equilateral	Isosceles	Scalene
Picture:			
Definition:	all same sides	2 same sides	all different sides

Are the indicated angles adjacent?

1. $\angle BAC$ and $\angle CAD$ 2. $\angle EFG$ and $\angle HGF$ 3. $\angle JNM$ and $\angle LNK$



vertical angles



$\angle 1$ and $\angle 2$ are complementary angles. Given the measure of $\angle 1$, find $m\angle 2$.

6. $m\angle 1 = 52^\circ$, $m\angle 2 = \underline{38^\circ}$ 7. $m\angle 1 = 76^\circ$, $m\angle 2 = \underline{14^\circ}$ 8. $m\angle 1 = 19^\circ$, $m\angle 2 = \underline{71^\circ}$

$\angle 1$ and $\angle 2$ are supplementary angles. Given the measure of $\angle 1$, find $m\angle 2$.

9. $m\angle 1 = 52^\circ$, $m\angle 2 = \underline{128^\circ}$ 10. $m\angle 1 = 76^\circ$, $m\angle 2 = \underline{104^\circ}$ 11. $m\angle 1 = 19^\circ$, $m\angle 2 = \underline{161^\circ}$

Stair Railing: A stair railing is designed as shown in the figure.

Use the angles identified in the figure to name two pairs of the indicated type of angle pair.