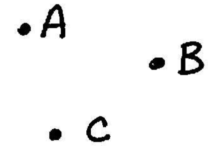
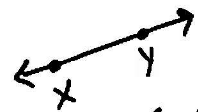
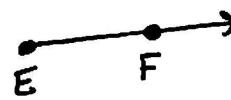
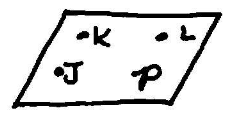
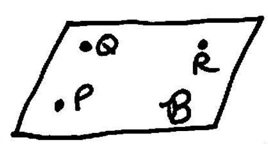
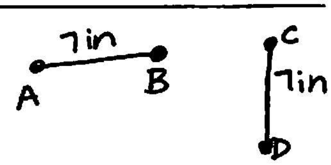
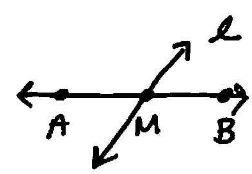
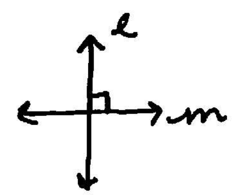
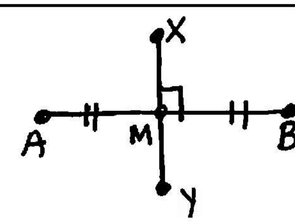
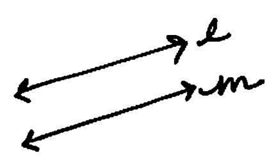
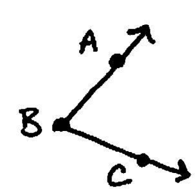
UNIT 1 DICTIONARY: GEOMETRY BASICS

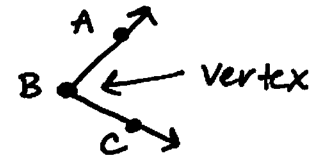
Points, Lines, & Planes	Definition	Example or Visual
POINT	A point is a location with no size or shape.	
LINE	A line is made up of points with no thickness or width.	 $\overleftrightarrow{XY}$
LINE SEGMENT	A measurable part of a line consisting of two endpoints.	 $\overline{RS}$
RAY	A line that extends indefinitely in one direction	 $\overrightarrow{EF}$
PLANE	A plane is a flat surface made up of points and extends indefinitely in all directions.	
COLLINEAR	Points that lie on the same line. * Non-collinear: points that do not lie on the same line.	 L, M, N are collinear
COPLANAR	Points that lie on the same plane. * Non-coplanar: points that do not lie on the same plane.	 P, Q, R are coplanar
CONGRUENT SEGMENTS	If two segments have the same length, then they are congruent.	 $AB = CD$; $\overline{AB} \cong \overline{CD}$

SEGMENT ADDITION POSTULATE	If A, B, and C are collinear points and B is between A and C, then $\overline{AB} + \overline{BC} = \overline{AC}$.	 $\overline{AB} + \overline{BC} = \overline{BC}$
DISTANCE FORMULA	The formula used to find the distance between two points on a coordinate plane.	$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$
MIDPOINT FORMULA	The formula used to find the midpoint between two endpoints.	$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right)$
SEGMENT BISECTOR	A segment, line, or plane that intersects a segment at its midpoint.	
PERPENDICULAR	Two lines that intersect at a 90° angle (right angle). symbol: $\perp$	
PERPENDICULAR BISECTOR	A line, segment, or ray perpendicular to a segment at its midpoint.	
PARALLEL LINES	Two lines that never intersect. Symbol: $\parallel$	 $l \parallel m$

Angles	Definition	Example or Visual
ANGLE	The intersection of two rays at an endpoint.	 $\angle ABC$

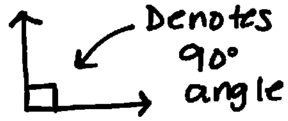
VERTEX

The common endpoint of an angle. (where the sides intersect)



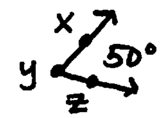
RIGHT ANGLE

An angle with a degree measure of 90°.



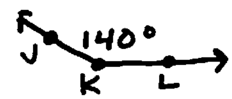
ACUTE ANGLE

An angle with a degree measure less than 90°.



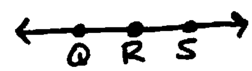
OBTUSE ANGLE

An angle with a degree measure greater than 90°.



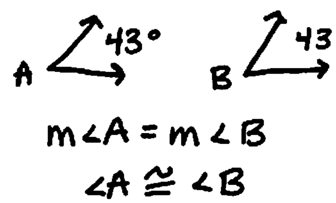
STRAIGHT ANGLE

An angle with a degree measure of 180°.



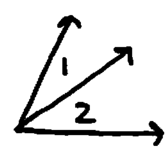
CONGRUENT ANGLES

Two angles that have the same measure are congruent



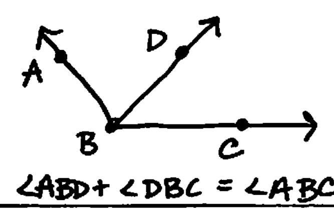
ADJACENT ANGLES

Two angles that share a common side and vertex. "Next to" each other.



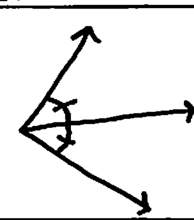
ANGLE ADDITION POSTULATE

If ∠ABD and ∠DBC are adjacent, then ∠ABD + ∠DBC = ∠ABC.



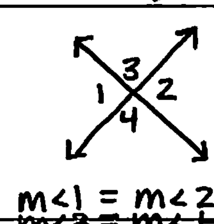
ANGLE BISECTOR

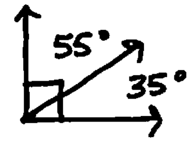
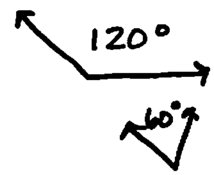
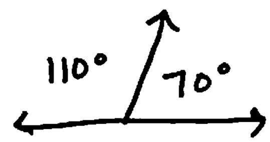
A line or ray that divides an angle into two equal parts.



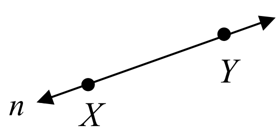
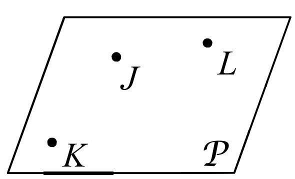
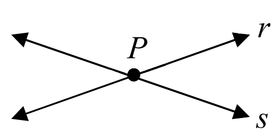
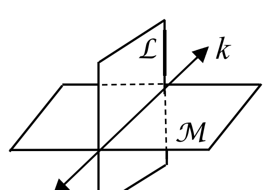
VERTICAL ANGLES

Two angles directly across from each other on intersecting lines. *Always congruent.*



COMPLEMENTARY ANGLES	Two angles with measures that sum to 90° * Do not have to be adjacent. *	
SUPPLEMENTARY ANGLES	Two angles with measures that sum to 180°. * Do not have to be adjacent. *	
LINEAR PAIR	Adjacent angles that are supplementary. Combined, they form a straight line.	

Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes
POINT 	• A point is a ______________________. • It has no ________________ or ____________. • Always use a <u>CAPITAL LETTER</u> to name a point. **Example:** __________________________
LINE 	• A line is made up of ____________________. • Any ______ points form a line. • A line has no ___________________ or ________________. • Name a line by any <u>two</u> points on the line, or a lowercase script letter. **Example:** ____ • **COLLINEAR POINTS:** Points that lie on the same line. • **NON-COLLINEAR POINTS:** Points that do NOT lie on the same line. **(Must be at least three points!)**
PLANE 	• A plane is a _________ _______________ made up of points. • Any _____ points make up a plane. • A plane extends indefinitely in all directions. • Name a plane by any <u>three</u> non-collinear points on the plane, or an uppercase script letter. **Example:** ____ • **COPLANAR POINTS:** Points that line on the same plane. • **NON-COPLANAR POINTS:** Points that do NOT lie on the same plane. **(Must be at least four points!)**
Intersecting **LINES & PLANES**	 **Two lines intersect at a ________________!**  **Two planes intersect at a ________________!**

Naming Points, Lines, and Planes: Practice!

1. Use the diagram to the right to name the following.

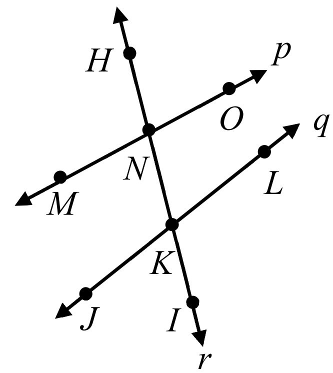
a) Four collinear points. __________________

b) A line that contains point M. __________________

c) A line that contains points H and K. __________________

d) Another name for line q. __________________

e) The intersection of lines p and r. ______________



2. Use the diagram to the right to name the following.

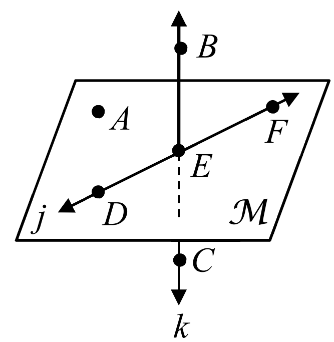
a) A line containing point F. __________

b) Another name for line k. __________

c) A plane containing point A. __________________

d) An example of three non-collinear points. __________

e) The intersection of plane M and line k. __________



3. Use the diagram to the right to name the following.

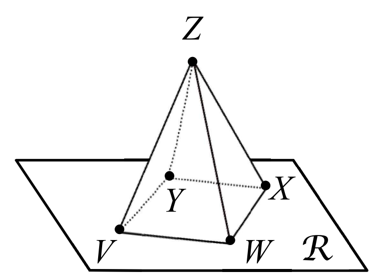
a) Three coplanar points. ________________

b) A plane containing point X. ______________________

c) The intersection of plane R and plane ZVY. __________

d) How many planes appear in the figure? __________

e) How many planes contain point W? __________



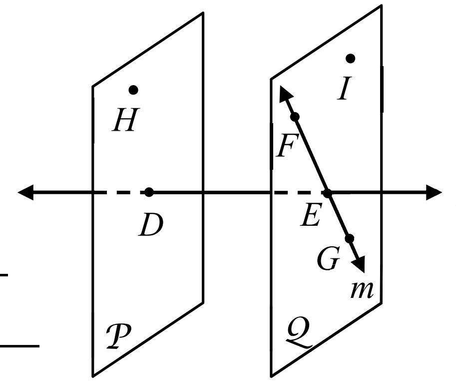
4. Use the diagram to the right to name the following.

a) The intersection of lines l and m. __________

b) Another name for plane $\mathcal{Q}$. ______________________

c) Are points D and E collinear or coplanar? _______________

d) How many times do planes $\mathcal{P}$ and $\mathcal{Q}$ intersect? ____________

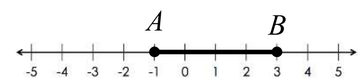


Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples

MEASURING SEGMENTS

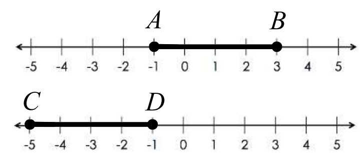
The distance between two points A and B be written as ______________________ or ________.



AB = ______

CONGRUENT SEGMENTS

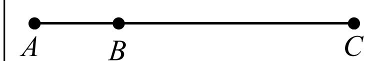
If ____________, then the segments are congruent. This is written as ______________.



SEGMENT ADDITION *Postulate*

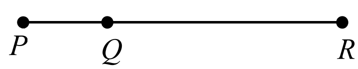
If A, B, and C, are collinear points and B is between A and C, then

____



Examples

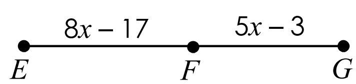
Use the diagram below for questions 1 and 2.



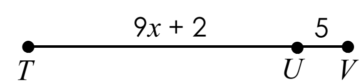
1. If $PQ = 9$ and $QR = 28$, find PR.

2. If $QR = 17$ and $PR = 21$, find PQ.

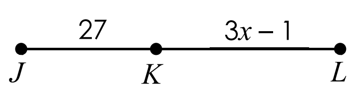
3. If $EG = 71$, find the value of x.



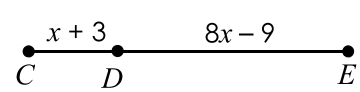
4. If $TV = 14x - 8$, find TU.



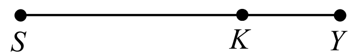
5. If $JL = 5x + 2$, find JL.



6. If $CE = 7x + 4$, find the value of x.



7. If $SK = 13x - 5$, $KY = 2x + 9$, and $SY = 36 - x$, find each value.



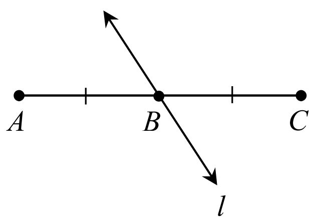
$x =$ ________

$SK =$ ________

$KY =$ ________

$SY =$ ________

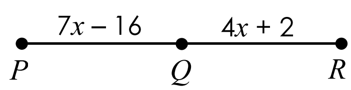
MIDPOINT
of a Segment



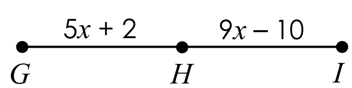
- The ________________ of a segment is a point that divides the segment into ________ ________________ ________________.
- A line, ray, or segment that intersects a segment at its midpoint is said to ______________ the segment and is called the ______________ ______________.
- In the diagram to the left, ______ is the midpoint of ________ and line ______ is a ______________ ______________ of ________.

Examples

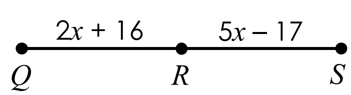
8. If Q is the midpoint of $\overline{PR}$, find the value of x.



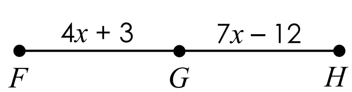
9. If H is the midpoint of $\overline{GI}$, find GH.



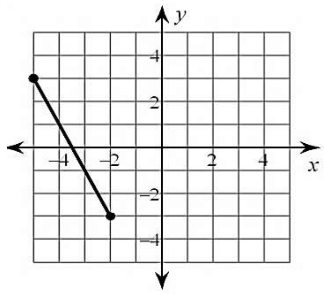
10. If R is the midpoint of $\overline{QS}$, find QS.



11. If G is the midpoint of $\overline{FH}$ and $FH = 6y - 2$, find y.



Name:	Class:
Topic:	Date:

Main Ideas/Questions	Notes
Distance Formula	Used to find the distance between two points (x_1, y_1) and (x_2, y_2)
	Formula:
Examples	**1.** Find the distance between the two points on the graph. 
	2. Find AB given A(-4, 1) and B(3, -1).
	3. Find EF given E(-7, -2) and F(11, 3)
Midpoint Formula	Used to find the midpoint between two points (x_1, y_1) and (x_2, y_2)
	Formula:
	4. Find the midpoint of $\overline{GH}$ given G(7, -5) and H(9, -1).
	5. Find the midpoint of $\overline{AB}$ given A(-7, 4) and B(3, -4).

Finding a Missing Endpoint

6. Find the coordinates of A if $M(-1, 2)$ is the midpoint of $\overline{AB}$ and B has coordinates of (3, -5).

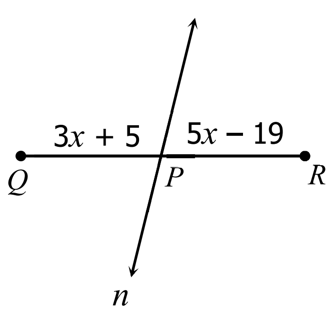
7. Find the coordinates of J if $K(-5, 10)$ is the midpoint of $\overline{JL}$ and L has coordinates of (-8, 6).

8. Find the coordinates of R if $Q(-1, 3)$ is the midpoint of $\overline{PR}$ and P has coordinates of (5, 6).

More Practice with Algebra

9. If P is the midpoint of $\overline{XY}$, $XP = 8x - 2$, and $PY = 12x - 30$, find the value of x.

10. If G is the midpoint of $\overline{FH}$, $FG = 14x + 25$, and $GH = 73 - 2x$, find FH.

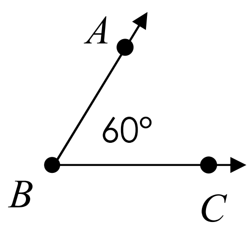


11. Using the diagram to the left, if line n bisects $\overline{QR}$, find QP.

Name:	Date:
Topic:	**Class:**

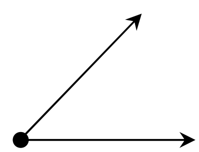
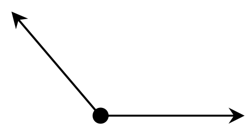
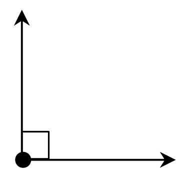
Main Ideas/Questions	Notes

Angles

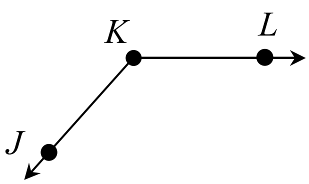


- An angle is formed by two ____________ with a common endpoint.
- This common endpoint is called the ________________
- The rays are called the ______________.
- Name an angle using _____________ letters. The middle letter must always represent the vertex!
- Use a single letter if there is only one angle located at the vertex.
- When referring to the measure of an angle, use a lowercase m.
  Example: $m\angle ABC = 60°$

Types of Angles

Example 1



a) Name the vertex of the angle. _______________

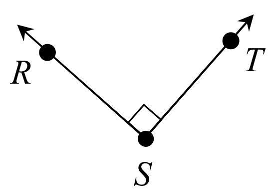
b) Name the sides of the angle. ___________________

c) Give three ways to name the angle.

__________________, __________________, __________________

d) Classify the angle. __________________

Example 2



a) Name the vertex of the angle. _______________

b) Name the sides of the angle. ___________________

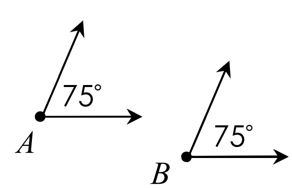
c) Give three ways to name the angle.

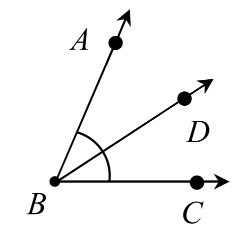
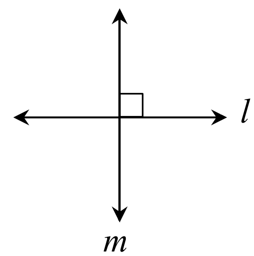
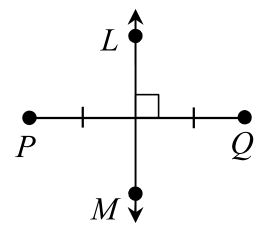
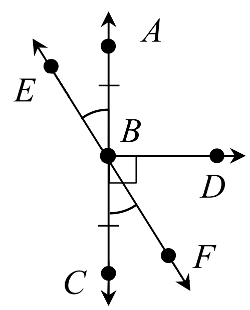
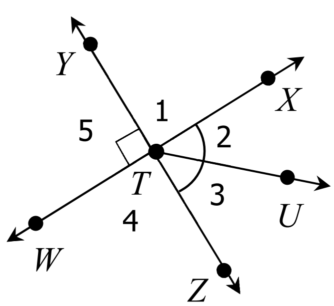
__________________, __________________, __________________

d) Classify the angle. __________________

Congruent Angles

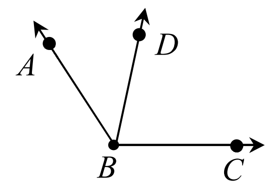
If ______________________, then the angles are congruent. This is written as ________________.



Angle Bisector	A ________ that divides an angle into ______ ________________________ ________________. In the diagram to the right, _______ is an angle bisector, therefore, ____________________________.	
Perpendicular Lines	Two lines that ___________________ at a _____________ __________. The symbol for perpendicular is _______. In the diagram to the right, __________________.	
Perpendicular Bisector	A line, segment, or ray _______________________ to a segment at its ________________. In the diagram to the right, ______ is the perpendicular bisector to ______.	
Example 3 	**a)** Write another name for $\angle CBF$. ________________ **b)** Name the sides of $\angle EBD$. ________________ **c)** Classify $\angle ABC$. ________________ **d)** Give an example of an obtuse angle. _______________ **e)** Name two congruent angles. _____________________ **f)** Name a perpendicular bisector. ___________	
Example 4 	**a)** Name the vertex of $\angle 2$. ________________ **b)** Name the sides of $\angle 4$. ________________ **c)** Write another name for $\angle 3$. ________________ **d)** Write another name for $\angle 1$. ________________ **e)** Classify $\angle YTW$. ________________ **f)** Classify $\angle YTU$. ________________ **g)** Classify $\angle XTU$. ________________ **h)** Classify $\angle WTX$. ________________ **i)** Name two perpendicular lines. ______________________ **j)** Name an angle bisector. _________	

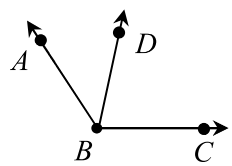
Name:	**Date:**
Topic:	**Class:**

Main Ideas/Questions	Notes/Examples
ANGLE ADDITION *Postulate*	If D is in the interior of $\angle ABC$, then ______________________



Examples

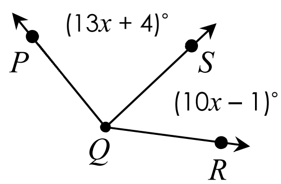
Use the diagram below to answer questions 1 and 2.



1. If $m\angle ABD$ = 48° and $m\angle DBC$ = 78°, find $m\angle ABC$.

2. If $m\angle DBC$ = 74° and $m\angle ABC$ = 119°, find $m\angle ABD$.

3. If $m\angle PQR$ = 141°, find each measure.

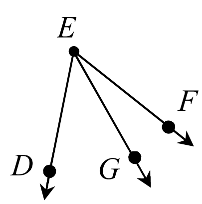


x = ________

$m\angle PQS$ = ________

$m\angle SQR$ = ________

4. If $m\angle DEF = (7x + 4)°$, $m\angle DEG = (5x + 1)°$, and $m\angle GEF$ = 23°, find each measure.

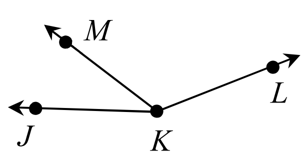


x = ________

$m\angle DEG$ = ________

$m\angle DEF$ = ________

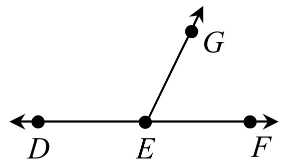
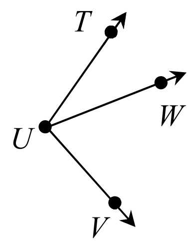
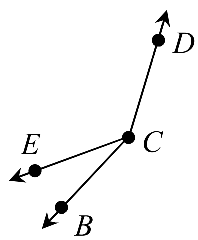
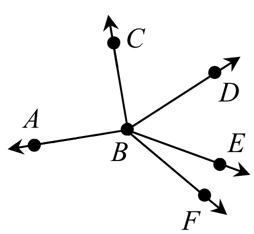
5. If $m\angle JKM$ = 43°, $m\angle MKL = (8x – 20)°$, and $m\angle JKL = (10x – 11)°$, find each measure.



x = ________

$m\angle MKL$ = ________

$m\angle JKL$ = ________

	6. If $\angle DEF$ is a straight angle, $m\angle DEG = (23x - 3)°$, and $m\angle GEF = (12x + 8)°$, find each measure.  $x =$ ________ $m\angle DEG =$ ________ $m\angle GEF =$ ________ $m\angle DEF =$ ________
	7. If $m\angle TUW = (5x + 3)°$, $m\angle WUV = (10x - 5)°$, and $m\angle TUV = (17x - 16)°$, find each measure.  $x =$ ________ $m\angle TUW =$ ________ $m\angle WUV =$ ________ $m\angle TUV =$ ________
	8. If $m\angle ECD$ is six less than five times $m\angle BCE$, and $m\angle BCD = 162°$, find each measure.  $m\angle BCE =$ ________ $m\angle ECD =$ ________
	**Use the diagram to the left to answer questions 9 and 10.** **9.** If $m\angle ABF = (6x + 26)°$, $m\angle EBF = (2x - 9)°$, and $m\angle ABE = (11x - 31)°$, find $m\angle ABF$. **10.** If $\overrightarrow{BD}$ bisects $\angle CBE$, $\overrightarrow{BC} \perp \overrightarrow{BA}$, $m\angle CBD = (3x + 25)°$, and $m\angle DBE = (7x - 19)°$, find $m\angle ABD$.

ANGLE Relationships

VERTICAL ANGLES

Two angles **across** from each other on intersecting lines. They are always **congruent!**

Example:

ADJACENT ANGLES

Two angles that are **next to** each other and share a common side.

Example:

LINEAR PAIR

Two angles that are **adjacent** and **supplementary**. They form **a straight line!**

Example:

COMPLEMENTARY ANGLES

Any two angles whose **sum is 90°**

Example:

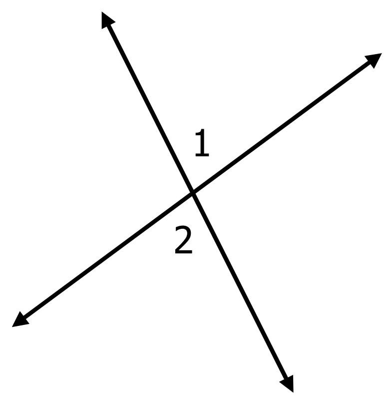
SUPPLEMENTARY ANGLES

Any two angles whose **sum is 180°**

Example:

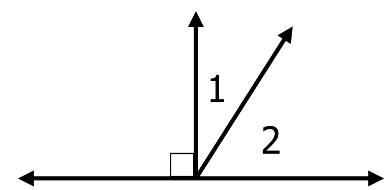
Identifying Types of Angles: Check all relationships between ∠1 and ∠2.

1



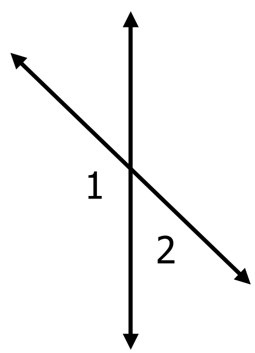
- ❑ Adjacent
- ❑ Vertical
- ❑ Complementary
- ❑ Supplementary
- ❑ Linear Pair

2



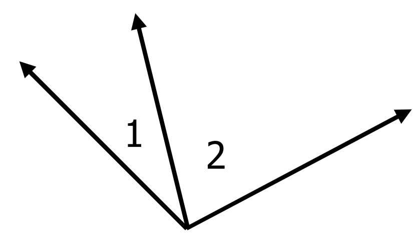
- ❑ Adjacent
- ❑ Vertical
- ❑ Complementary
- ❑ Supplementary
- ❑ Linear Pair

3



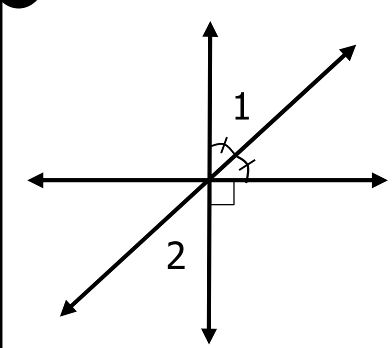
- ❑ Adjacent
- ❑ Vertical
- ❑ Complementary
- ❑ Supplementary
- ❑ Linear Pair

4



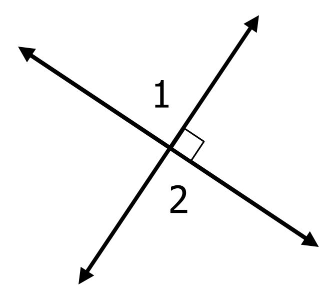
- ❑ Adjacent
- ❑ Vertical
- ❑ Complementary
- ❑ Supplementary
- ❑ Linear Pair

5



- ❑ Adjacent
- ❑ Vertical
- ❑ Complementary
- ❑ Supplementary
- ❑ Linear Pair

6

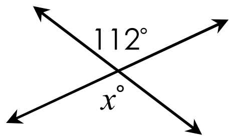


- ❑ Adjacent
- ❑ Vertical
- ❑ Complementary
- ❑ Supplementary
- ❑ Linear Pair

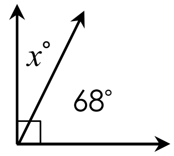
Using ANGLE RELATIONSHIPS *to find* ANGLE MEASURES

Directions: Find the missing measures in each figure. Keep the angle relationships in mind.

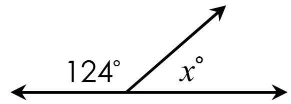
1.



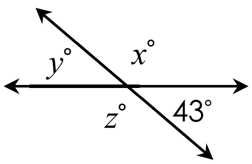
2.



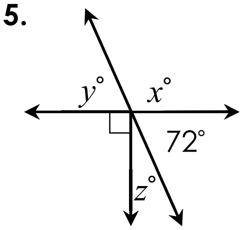
3.



4.



5.



6. ∠1 and ∠2 are vertical angles. If the measure of ∠2 is 105°, find the measure of ∠1.

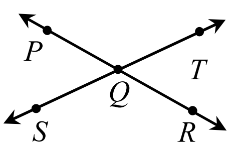
7. ∠*A* and ∠*B* are complementary angles. If the measure of ∠*A* is 42°, find the measure of ∠*B*.

8. ∠*P* and ∠*Q* are supplementary angles. If the measure of ∠*Q* is 64°, find the measure of ∠*P*.

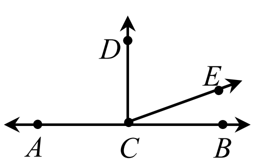
9. ∠1 and ∠2 form a linear pair. If the measure of ∠1 is 113°, find the measure of ∠2.

USING ALGEBRA

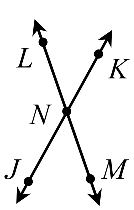
10. If $m\angle PQT = (3x + 47)^\circ$ and $m\angle SQR = (6x - 25)^\circ$, find the measure of $\angle SQR$.



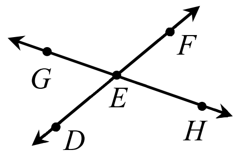
11. If $\overleftrightarrow{AB} \perp \overleftrightarrow{CD}$, $m\angle DCE = (7x + 2)^\circ$ and $m\angle ECB = (x + 8)^\circ$, find the measure of $\angle DCE$.



12. If $m\angle KNM = (8x - 5)^\circ$ and $m\angle MNJ = (4x - 19)^\circ$, find the measure of $\angle KNM$.



13. If $m\angle DEG = (5x - 4)°$, $m\angle GEF = (7x - 8)°$, $m\angle DEH = (9y + 5)°$, find the values of x and y.



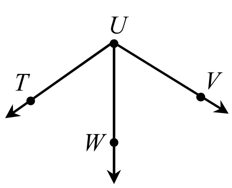
14. $\angle R$ and $\angle S$ are complementary angles. If $m\angle R = (12x - 3)°$ and $m\angle S = (7x - 2)°$, find $m\angle R$.

15. $\angle P$ and $\angle Q$ are supplementary angles. If $m\angle P = (4x + 1)°$ and $m\angle Q = (9x - 3)°$, find $m\angle Q$.

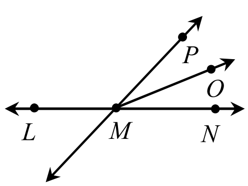
16. $\angle 1$ and $\angle 2$ form a linear pair. The measure of $\angle 2$ is six more than twice the measure of $\angle 1$. Find $m\angle 2$.

17. $\angle J$ and $\angle K$ are complementary angles. The measure of $\angle J$ is 18 less than the measure of $\angle K$. Find the measure of each angle.

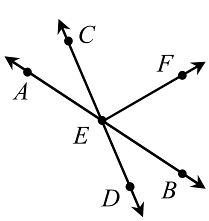
18. If $\overrightarrow{UW}$ bisects $\angle TUV$, $m\angle TUW = (13x - 5)°$ and $m\angle WUV = (7x + 31)°$, find the value of x.



19. If $\overrightarrow{MO}$ bisects $\angle PMN$, $m\angle PMN = 74°$ and $m\angle OMN = (2x + 7)°$, find the value of x.



20. If $\overrightarrow{EF}$ bisects $\angle CEB$, $m\angle CEF = (7x + 21)°$ and $m\angle FEB = (10x - 3)°$, find the measure of $\angle DEB$.

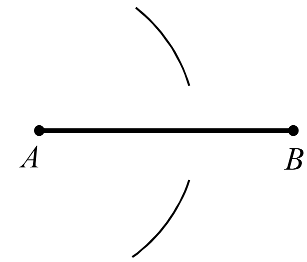
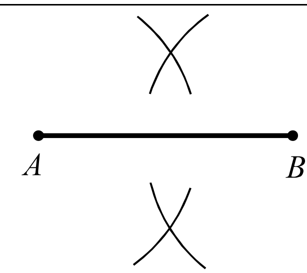
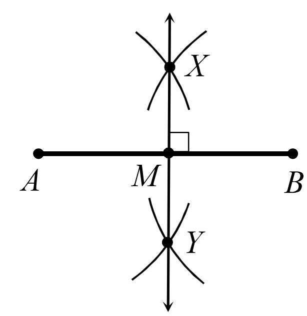


Constructions!

Follow the directions to create the basic constructions.

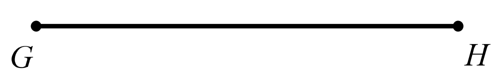
Type 1: Perpendicular Bisector of a Segment

Goal: Draw the perpendicular bisector to $\overline{AB}$.

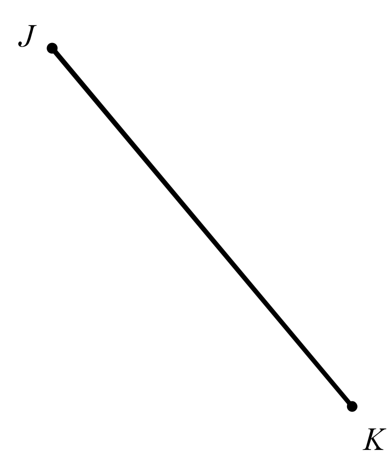
Step 1: Place the compass at point A. Adjust the radius so it's more than one half the length of the segment. Draw two arcs as shown.	
Step 2: Keeping the same compass radius, place the compass on point B. Draw two more arcs intersecting the previous arcs. Label the intersection points X and Y.	
Step 3: Using a straight edge, draw $\overleftrightarrow{XY}$. Label the intersection M.	

Now you Try! Draw the perpendicular bisector of each given segment.

1)

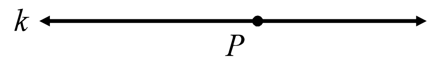


2)

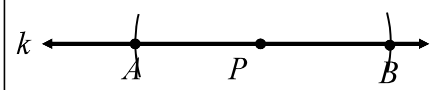


Type 2: Perpendicular through a Point on the Line

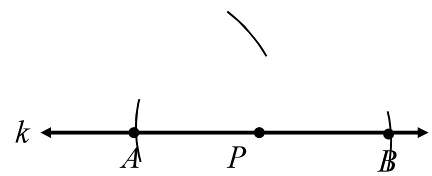
Goal: Draw a line perpendicular to line k, through point P.



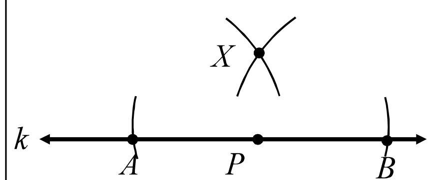
Step 1: Place the compass on point P. Using any radius, draw arcs intersecting line k at two points. Label the intersection points A and B.



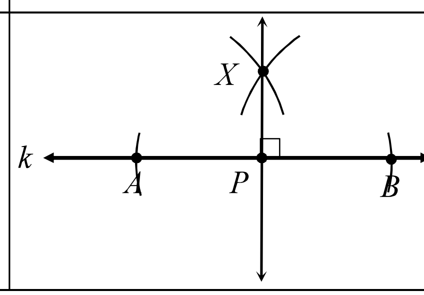
Step 2: Place the compass at point A. Adjust the radius so it's more than one half the length of $\overline{AB}$. Draw an arc as shown.



Step 3: Keeping the same radius, place the compass at point B. Draw an arc intersecting the previously drawn arc. Label the intersection point X.

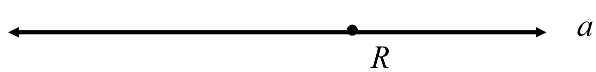


Step 4: Using a straightedge, draw $\overleftrightarrow{XP}$.

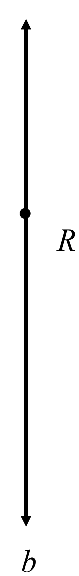


Now you Try! Draw a line perpendicular to the given line, through point R.

1)

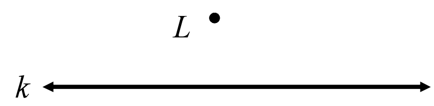


2)

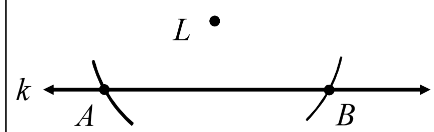


Type 3: Perpendicular through a Point not on the Line

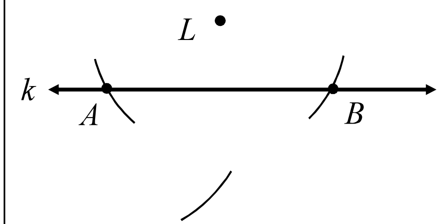
Goal: Draw a line perpendicular to line k, through point L.



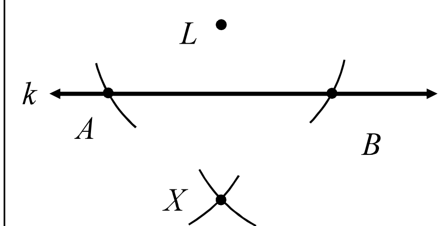
Step 1: Place the compass on point L. Using any radius, draw arcs intersecting line k at two points. Label the intersection points A and B.



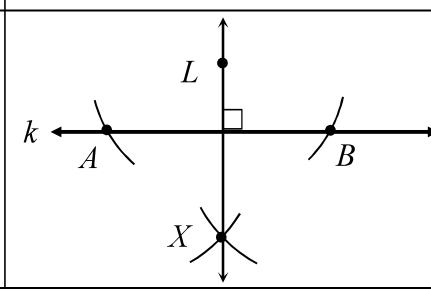
Step 2: Place the compass at point A. Adjust the radius so it's more than one half the length of AB. Draw an arc as shown.



Step 3: Keeping the same radius, place the compass at point B. Draw an arc intersecting the previously drawn arc. Label the intersection point X.

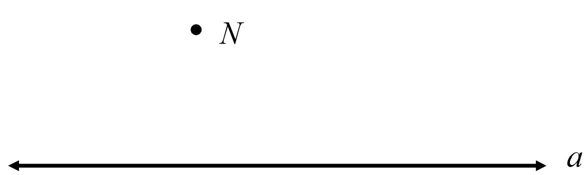


Step 4: Using a straightedge, draw $\overleftrightarrow{LX}$.

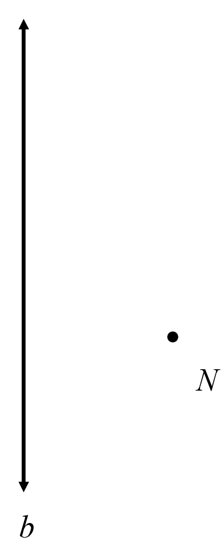


Now you Try! Draw a line perpendicular to the given line, through point N.

1)

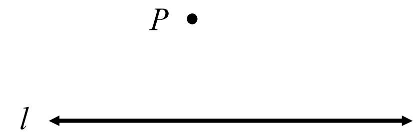


2)

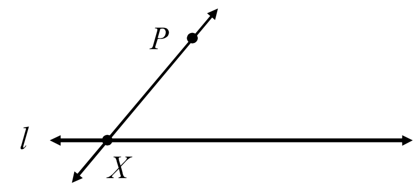


Type 4: Line Parallel to a Given Line, through a Given Point

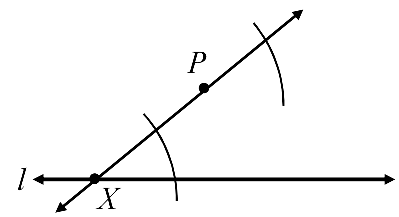
Goal: Draw a line parallel to line l, through point P.



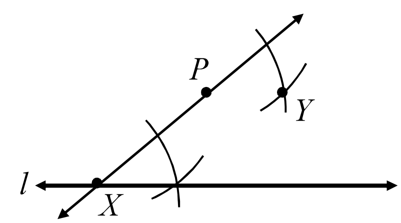
Step 1: Using a straightedge, draw a line through point P, intersecting line l as shown. Label the intersection point X.



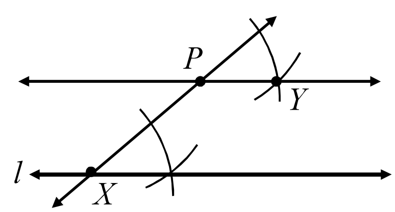
Step 2: Place the compass on point X and draw an arc intersecting both lines. Keeping the same radius, place the compass on point P and draw another arc.



Step 3: Set the compass radius to the distance between the two intersection points of the first arc. Now, place the compass at the point where the second arc intersected $\overleftrightarrow{PX}$. Draw another arc, and mark this intersection point Y.

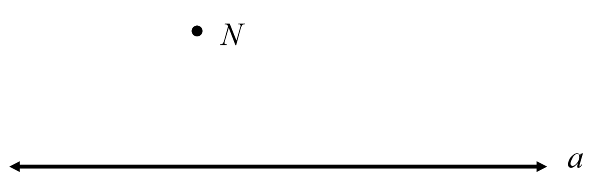


Step 4: Using a straightedge, draw $\overleftrightarrow{PY}$.

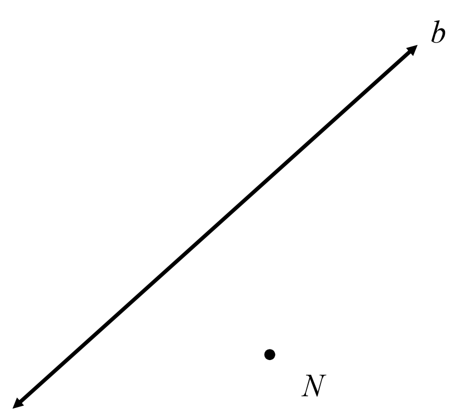


Now you Try! Draw a line parallel to the given line, through point N.

1)

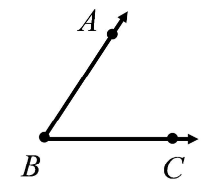


2)

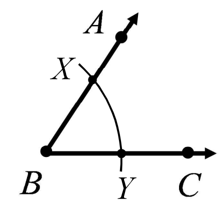


Type 5: Angle Bisector

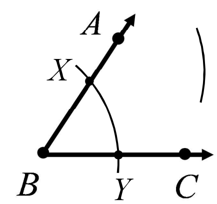
Goal: Construct the bisector of $\angle ABC$.



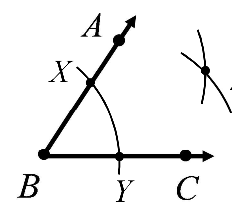
Step 1: Place the compass on the vertex of the angle. Draw an arc that intersects both sides of the angle. Label the intersection points X and Y.



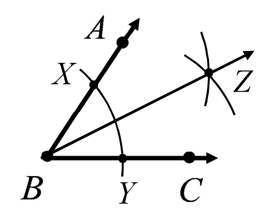
Step 2: Place the compass on point X and draw an arc on the interior of the angle.



Step 3: Without changing the radius, place the compass on point Y and draw another arc, intersecting the arc drawn in the last step. Label the intersection point Z.

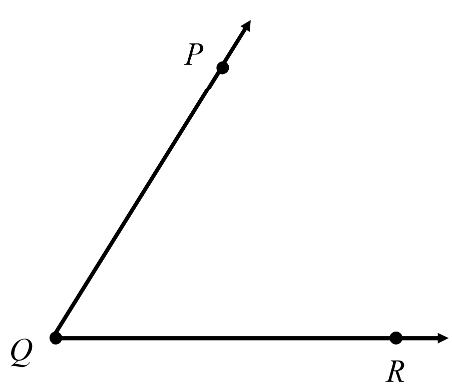


Step 4: Using a straightedge, draw $\overrightarrow{BZ}$.

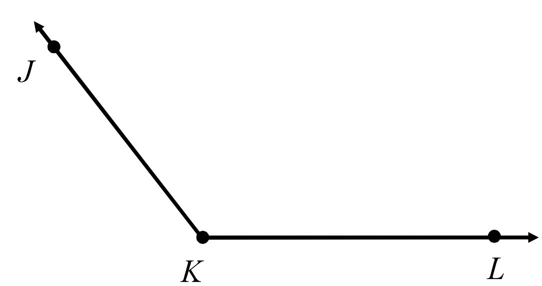


Now you Try! Construct the bisector of each given angle.

1)

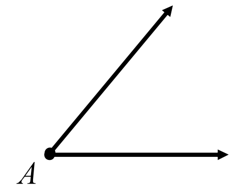


2)

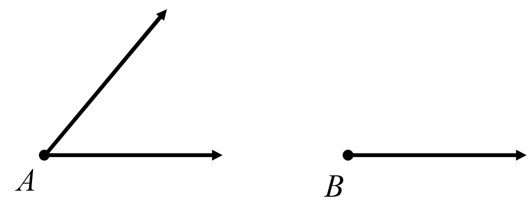


Type 6: Congruent Angles

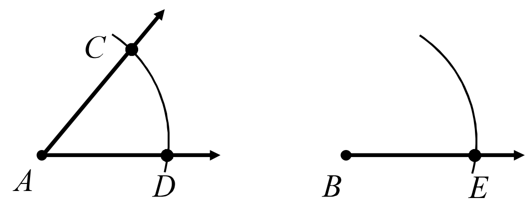
Goal: Construct an angle congruent to $\angle A$.



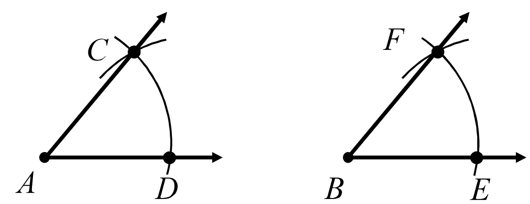
Step 1: Begin by drawing a ray with endpoint B.



Step 2: Place the compass on point A and draw an arc intersecting both sides of the angle. Without changing the radius, place the compass on point B and draw a long arc. Label the intersection points as C, D, and E.

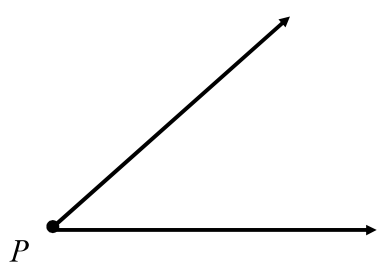


Step 3: Set the radius of the compass to the length of CD. Place the compass on point E and draw an arc intersecting the previous arc. Label the intersection point F. Draw $\overrightarrow{BF}$.

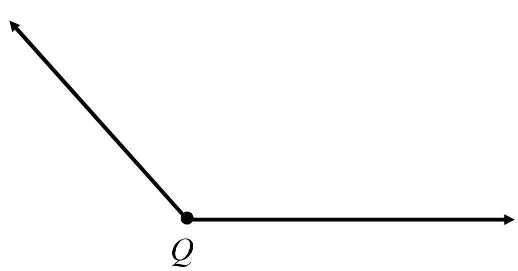


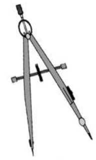
Now you Try! Given each angle, construct a congruent angle.

1)



2)

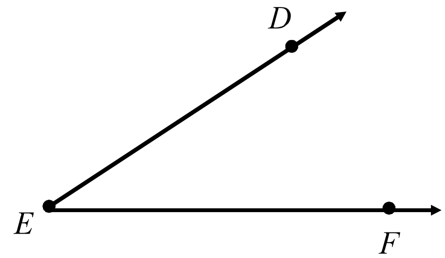




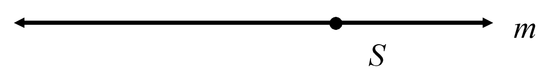
More Constructions Practice!

Create each construction using your compass and straightedge.

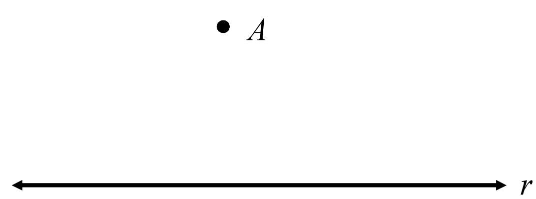
1. Construct the bisector of $\angle DEF$.



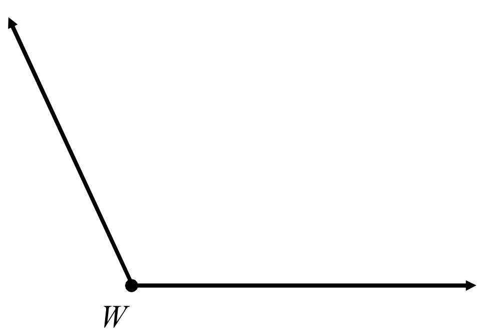
2. Construct a line perpendicular to line m, through point S.



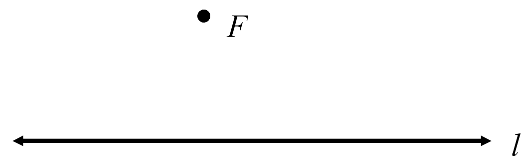
3. Construct a line parallel to line r, through point A.



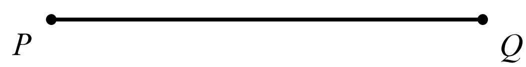
4. Construct an angle congruent to $\angle W$.



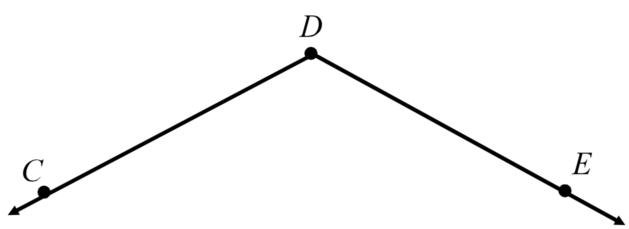
5. Construct a line perpendicular to line l, through point F.



6. Construct the perpendicular bisector of $\overline{PQ}$.



7. Construct the bisector of $\angle CDE$.



8. Construct a line parallel to line p, through point M.