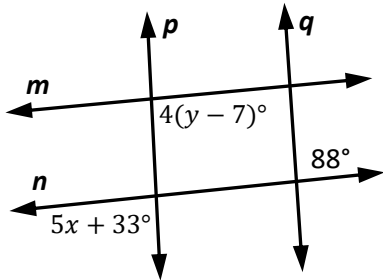


Lines and Angles

Lines and Angles

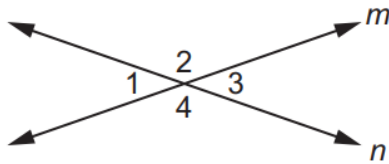
1) In the diagram, $m \parallel n$ and $p \parallel q$.



What are the values of x and y ?

- A. $x = 11$ and $y = 30$
- B. $x = 11$ and $y = 92$
- C. $x = 88$ and $y = 30$
- D. $x = 88$ and $y = 92$

2) In the diagram below, line m intersects line n .

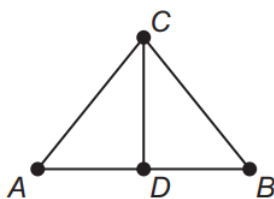


Select the choice that completes the proof that vertical angles $\angle 1$ and $\angle 3$ are congruent.

	Statements	Reasons
1.	Line m intersects line n .	Given
2.	$\angle 1$ and $\angle 2$ form a linear pair. $\angle 2$ and $\angle 3$ form a linear pair.	Definition of a linear pair
3.	$m\angle 1 + m\angle 2 = 180^\circ$ $m\angle 2 + m\angle 3 = 180^\circ$	Angles that form a linear pair have measures that sum to 180°
4.	?	?
5.	$m\angle 1 = m\angle 3$	Subtraction Property of Equality
6.	$\angle 1 \cong \angle 3$	Definition of congruent angles

- A. $m\angle 1 + m\angle 3 = 180^\circ$; Definition of a linear pair
- B. $m\angle 1 + m\angle 3 = 180^\circ$; Angle addition postulate
- C. $m\angle 1 + m\angle 2 = m\angle 2 + m\angle 3$; Substitution
- D. $m\angle 1 + m\angle 2 = m\angle 2 + m\angle 3$; Symmetric Property of Equality

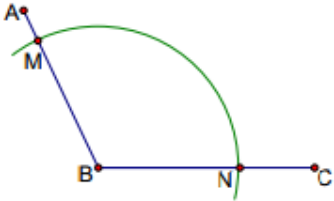
3) In the diagram below, \overline{CD} is the perpendicular bisector of \overline{AB} . Based on this information which other statements can be proven to be true? Select All that apply.



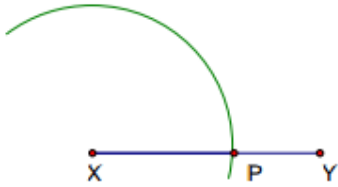
- A. $\overline{AC} \cong \overline{AD}$
- B. $\overline{AC} \cong \overline{CB}$
- C. $\overline{AD} \cong \overline{DB}$
- D. $\overline{CB} \cong \overline{CD}$
- E. $\overline{CB} \cong \overline{AB}$

Lines and Angles

4) Tina is constructing an angle congruent to $\angle ABC$. What is her next step?



- A. Using MN as the radius, place the center of the compass on P and construct an intersecting arc.
- B. Using MB as the radius, place the center of the compass on P and construct an intersecting arc.
- C. Using MN as the radius, place the center of the compass on Y and construct an intersecting arc.
- D. Using MN as the radius, place the center of the compass on X and construct the intersecting arc.



5) A student followed the given steps below to complete a construction.

Step 1: Place the compass on one endpoint of the line segment.

Step 2: Extend the compass from the chosen endpoint so that the width of the compass is more than half the distance between the two points.

Step 3: Without changing the compass width, draw an arc on each side of the line segment.

Step 4: Without changing the compass width, repeat the process from **Step 3** on the other endpoint of the line segment, making sure that the two new arcs intersect the first two arcs that were constructed.

Step 5: Plot a point on the intersection of the two arcs on each side of the line segment.

Step 6: Use a straightedge to draw a line between the two points.

Which type of construction is best represented by the steps given above?

- A. perpendicular bisector of a line segment
- B. angle congruent to a given angle
- C. parallel line through a point not on the given line
- D. bisector of an angle