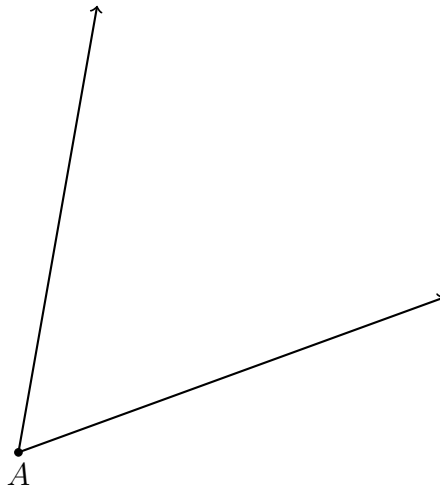


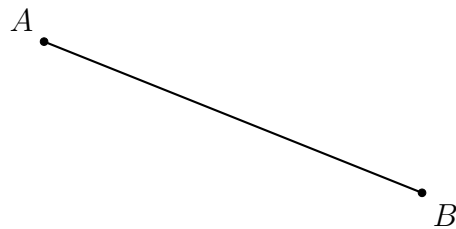
13.4 Do Now: Construction & similarity pre-quiz

Use only a compass and straightedge for these classical constructions, showing all construction marks.

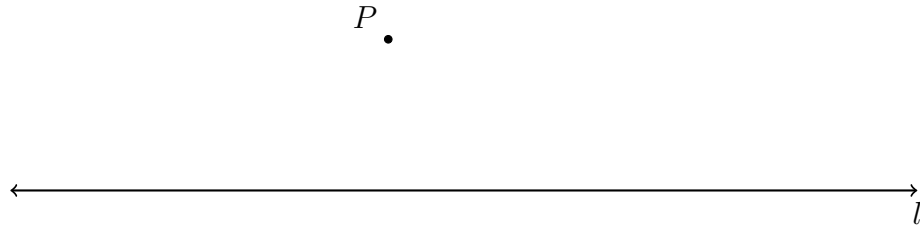
1. Bisect the given angle.



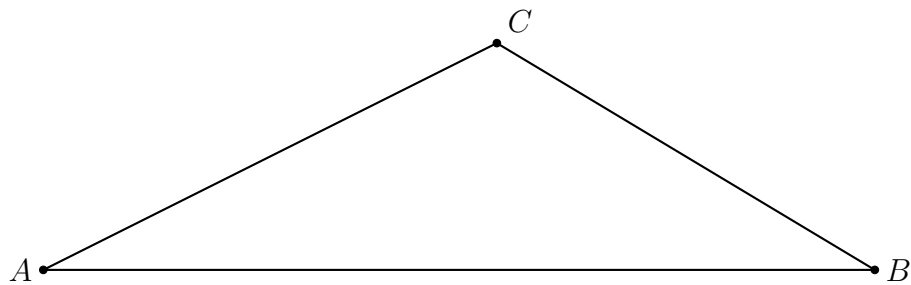
2. Construct the perpendicular bisector to \overline{AB} .



3. Given the line l and point P , construct the perpendicular to l through P .



4. Construct a perpendicular to \overline{AB} through C .



5. Given \overline{APJ} and \overline{KPB} as shown below. $\overline{AB} \parallel \overline{JK}$. $AP = 6$, $JP = 10$, and $BP = 3$.

(a) $\triangle ABP \sim$ _____

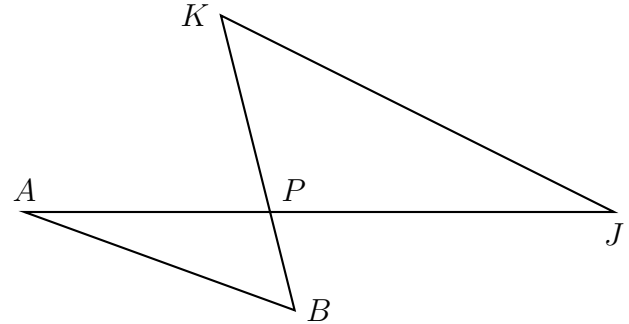
(b) $\overline{AP} \rightarrow$ _____

(c) $\overline{BP} \rightarrow$ _____

(d) What is the scale factor?

$k =$ _____ $=$

(e) Find KP .



6. Given the diagram below, with \overline{ABD} , \overline{ACE} , and $\angle ABC \cong \angle AED$. Also, $AB = 30$, $AC = 24$, and $BD = 12$.

(a) $\triangle ABC \sim$ _____

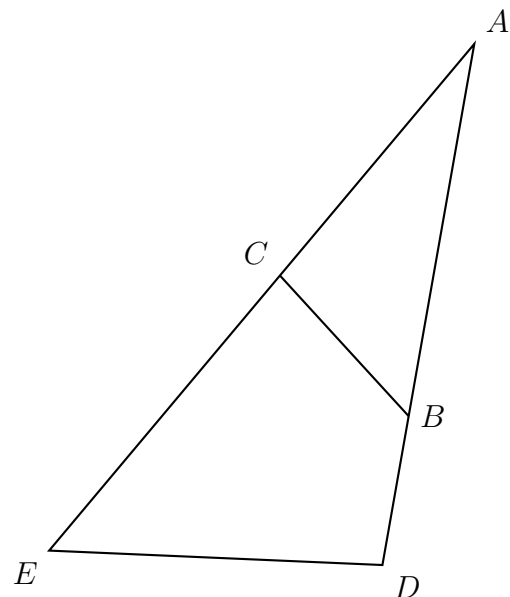
(b) $\overline{AB} \rightarrow$ _____

(c) $\overline{AC} \rightarrow$ _____

(d) What is the scale factor?

$k =$ _____ $=$

(e) Find CE .



7. In the diagram below, the chords \overline{AE} and \overline{BD} intersect at C . Given that $AC = 8$, $BC = 10$, and $CE = 20$. The arc measure of $m\widehat{AD} = 170^\circ$.

(a) $\triangle ABC \sim$ _____

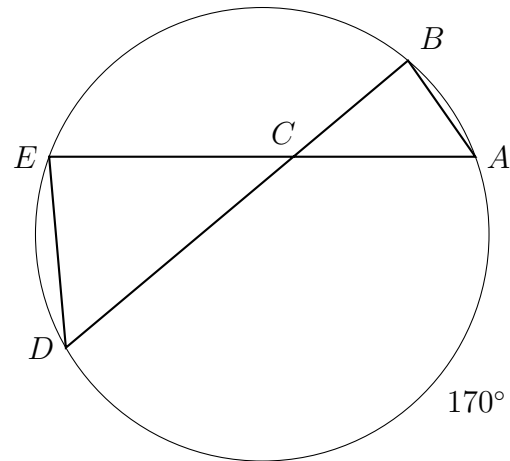
(b) $\overline{AC} \rightarrow$ _____

(c) $\overline{BC} \rightarrow$ _____

(d) What is the scale factor?

$$k = \underline{\hspace{1cm}} =$$

(e) Find CD .



8. In the diagram below, the chords \overline{AD} and \overline{BE} intersect at C . Given that $AC = 12$, $BC = 15$, and $CD = 20$.

(a) $\triangle ABC \sim$ _____

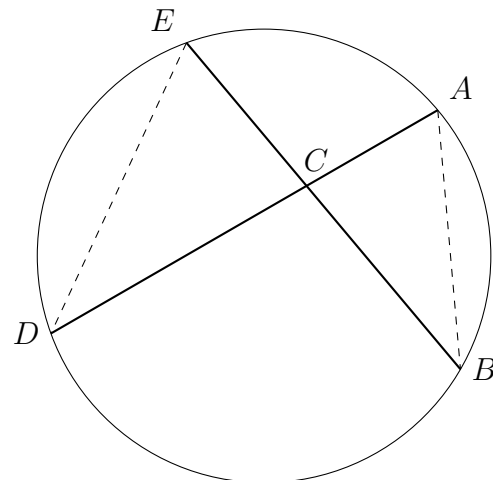
(b) $\overline{AC} \rightarrow$ _____

(c) $\overline{BC} \rightarrow$ _____

(d) What is the scale factor?

$$k = \underline{\hspace{1cm}} =$$

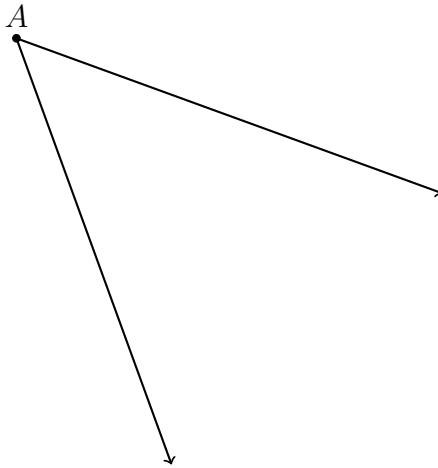
(e) Find CE .



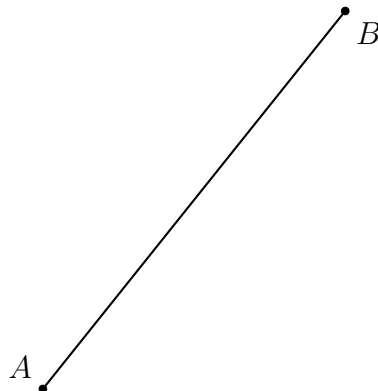
13.4 Exit Note: Construction & similarity quiz

Use only a compass and straightedge for these classical constructions, showing all construction marks.

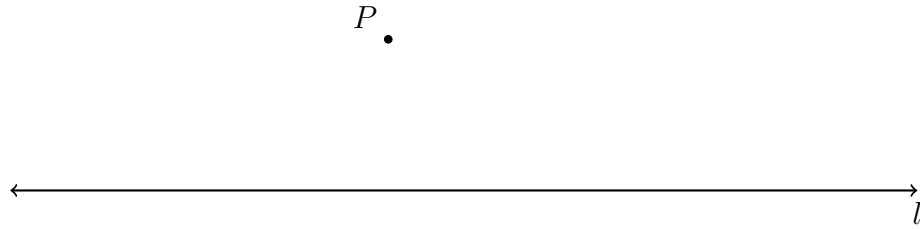
1. Bisect the given angle.



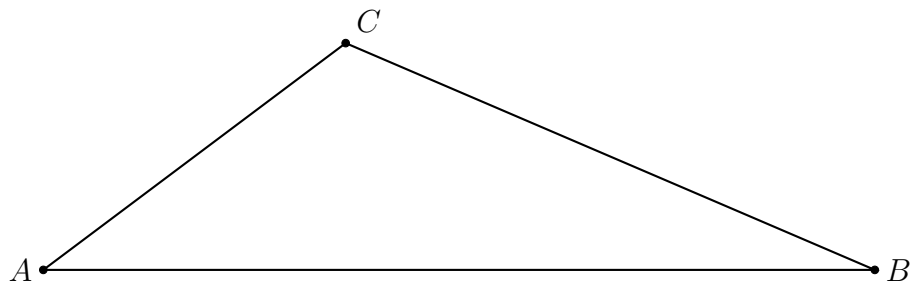
2. Construct the perpendicular bisector to \overline{AB} .



3. Given the line l and point P , construct the perpendicular to l through P .



4. Construct a perpendicular to \overline{AB} through C .



5. Given \overline{APJ} and \overline{KPB} as shown below. $\overline{AB} \parallel \overline{JK}$. $AP = 4.8$, $JP = 12$, and $BP = 2.2$.

(a) $\triangle ABP \sim$ _____

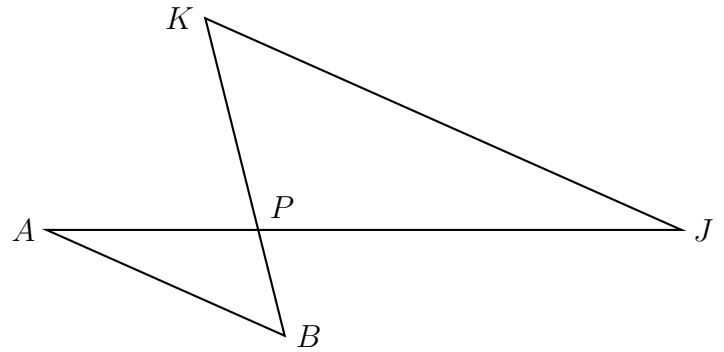
(b) $\overline{AP} \rightarrow$ _____

(c) $\overline{BP} \rightarrow$ _____

(d) What is the scale factor?

$k =$ _____ $=$

(e) Find KP .



6. Given the diagram below, with \overline{ABD} , \overline{ACE} , and $\angle ABC \cong \angle AED$. $AB = 10$, $AC = 8$, and $AD = 14$.

(a) $\triangle ABC \sim$ _____

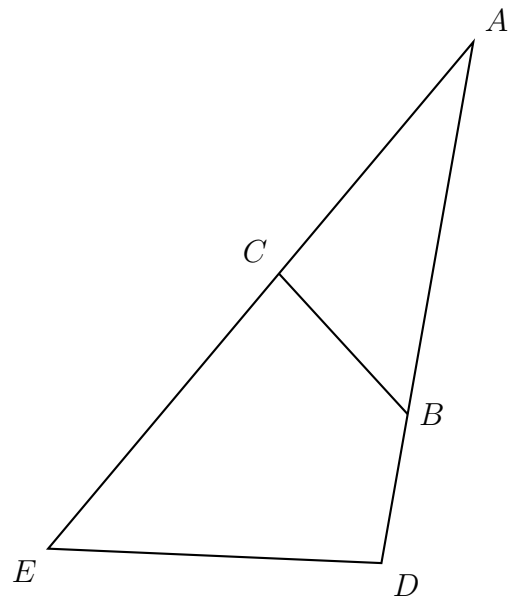
(b) $\overline{AB} \rightarrow$ _____

(c) $\overline{AC} \rightarrow$ _____

(d) What is the scale factor?

$k =$ _____ $=$

(e) Find AE .



7. In the diagram below, the chords \overline{AD} and \overline{BE} intersect at C . Given that $AC = 5$, $BC = 4$, and $CD = 10$.

(a) $\triangle ABC \sim$ _____

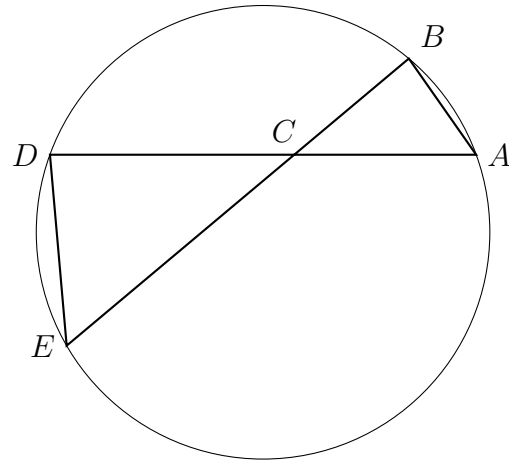
(b) $\overline{AC} \rightarrow$ _____

(c) $\overline{BC} \rightarrow$ _____

(d) What is the scale factor?

$k =$ _____ $=$

(e) Find CE .



8. In the diagram below, the chords \overline{AE} and \overline{BD} intersect at C . Given that $AC = 6$, $BC = 9$, and $CE = 12$.

(a) $\triangle ABC \sim$ _____

(b) $\overline{AC} \rightarrow$ _____

(c) $\overline{BC} \rightarrow$ _____

(d) What is the scale factor?

$k =$ _____ $=$

(e) Find CD .

