

Chapter 8

Which of these are ratios?

$$\frac{15}{20}$$

$$6 + g$$

$$15x$$

$$\frac{7}{4} = \frac{5}{x}$$

$$\frac{28}{12}$$

$$\frac{2}{x} = \frac{9}{13}$$

Good! Now, are they simplified?

- KRIS and LAUR are similar squares
 - $RI = 6$ and $AU = 9$
- Write a ratio of the side of square LAUR to it's perimeter
- Write a ratio of the perimeter of KRIS to the perimeter of LAUR

- OLDN and GRAV are similar rectangles
 - $OL = 2$, $LD = 5$, $RA = 10$ and $AV = 4$
- Write a ratio of side OL of rectangle OLDN to it's perimeter
- Write a ratio of the area of GRAV to the area of OLDN



In similar polygons:

angles are _____

side lengths are _____

What are the 3 methods to prove triangles similar?

Triangle ACE and Triangle NAT are similar
with a scale factor of 3:7

If $AC = 10$, what is NA ?

If $NT = 21$, what is AE ?

Triangle BAD and Triangle DOG are similar
with a scale factor of 2:5

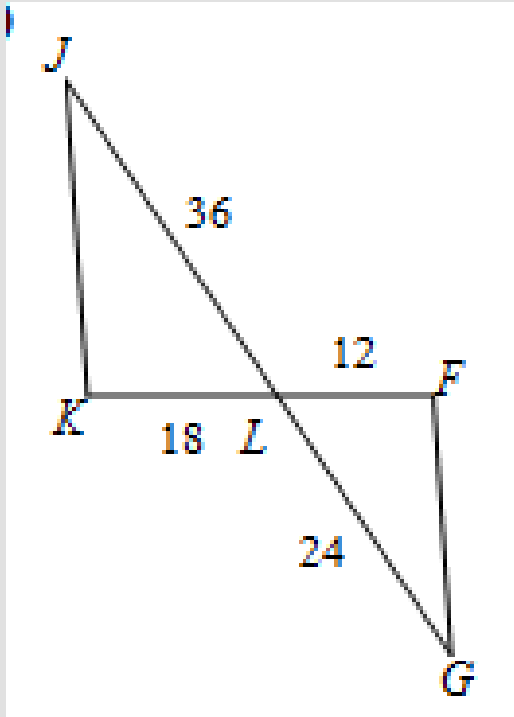
If $DO = 6$, what is BA ?

If $BD = 3$, what is DG ?

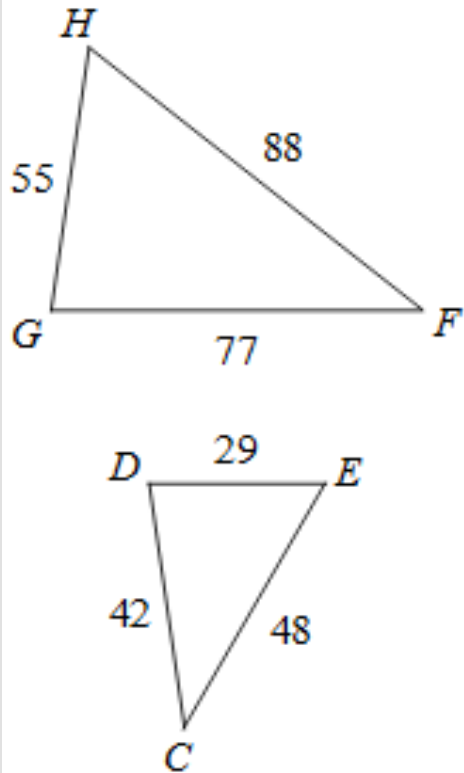
- Prove that Circle E centered at $(-3, 0)$ and $r = 5$ is similar to Circle E' centered at $(4, 3)$ and $r = 1$ using transformations

- Prove that Circle A centered at $(4, 5)$ and $r = 2$ is similar to Circle A' centered at $(3, 1)$ and $r = 3$ using transformations

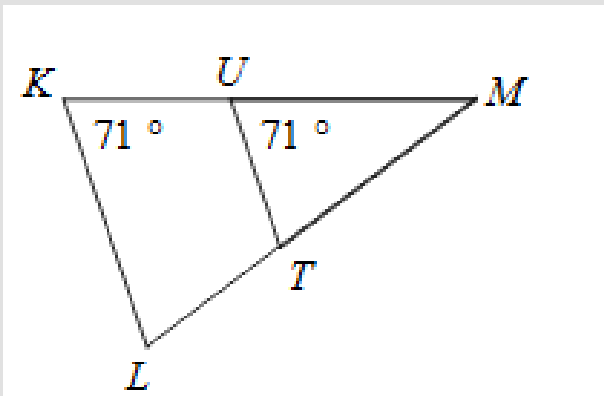
Determine if triangles are similar. If so, what theorem justifies this?



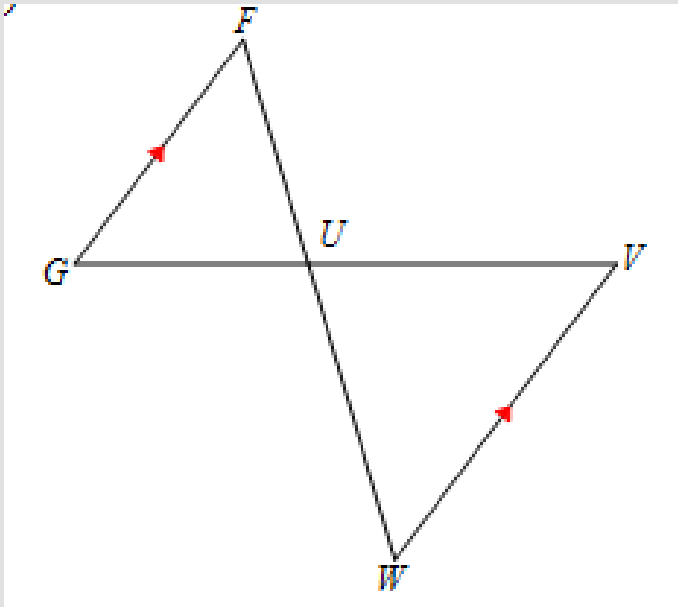
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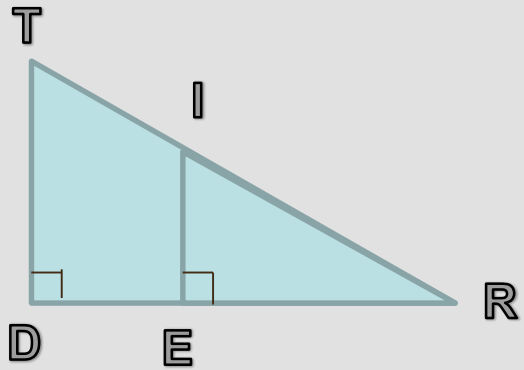


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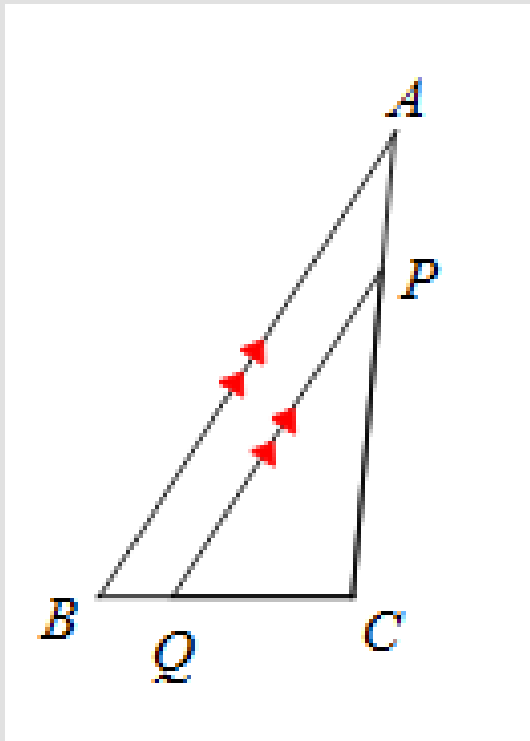
Determine if triangles are similar. If so, what theorem justifies this?





If $RI = 7$, $IT = 3$, $IE = 5$, what is DT ?

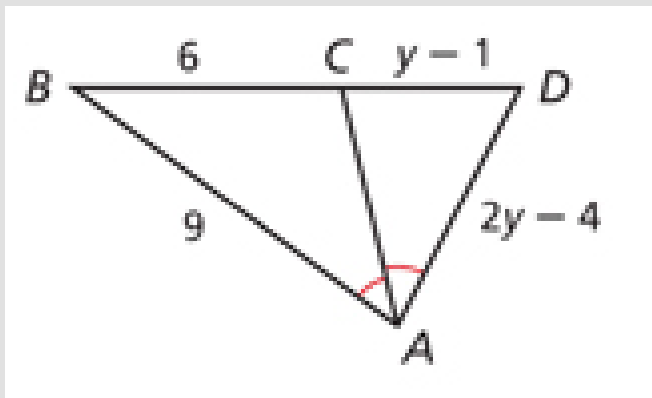
If $RD = 16$, $ED = 10$, $RI = 8$, what is IT ?



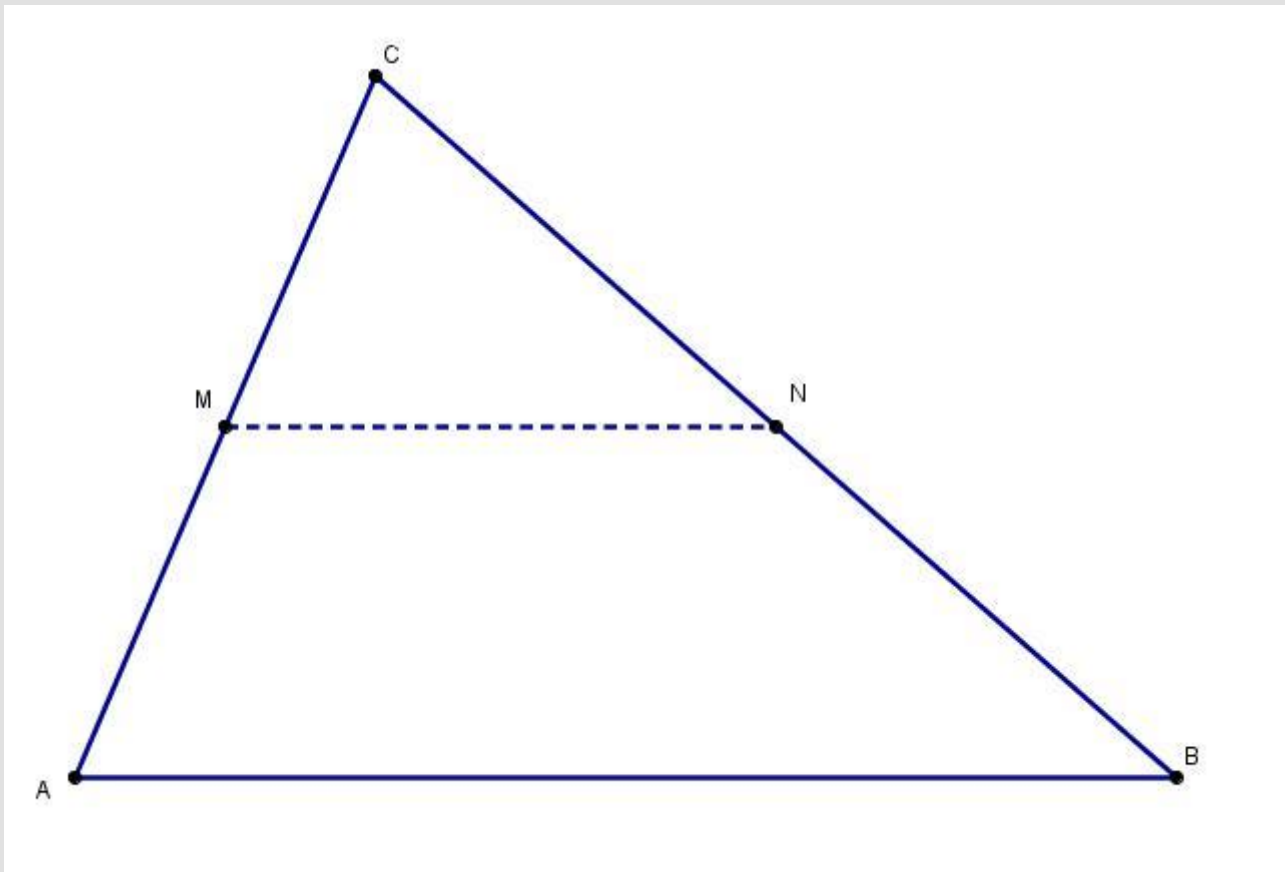
If $CP = 6$, $PA = 2$, $QP = 4$, what is AB ?

If $AP = 10$, $PC = 14$, $BQ = 8$, what is QC ?

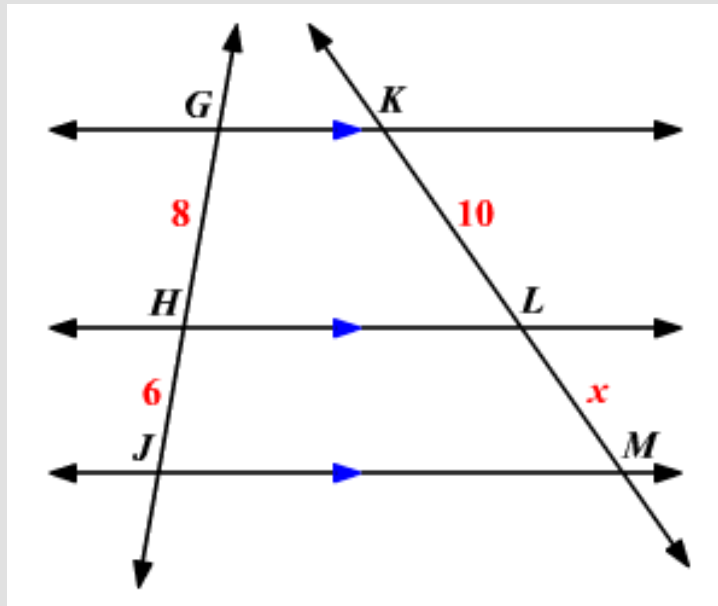
Find y



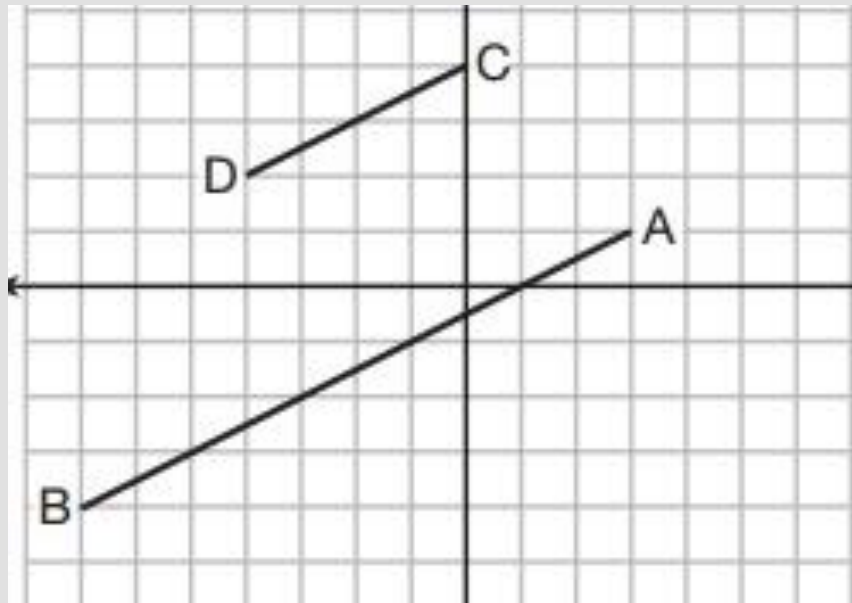
What must you know about MN and AB to prove the triangles similar?



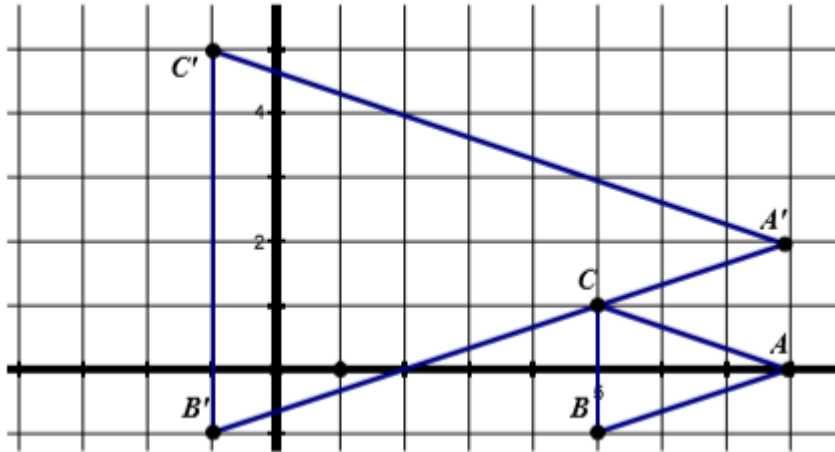
Solve for x .



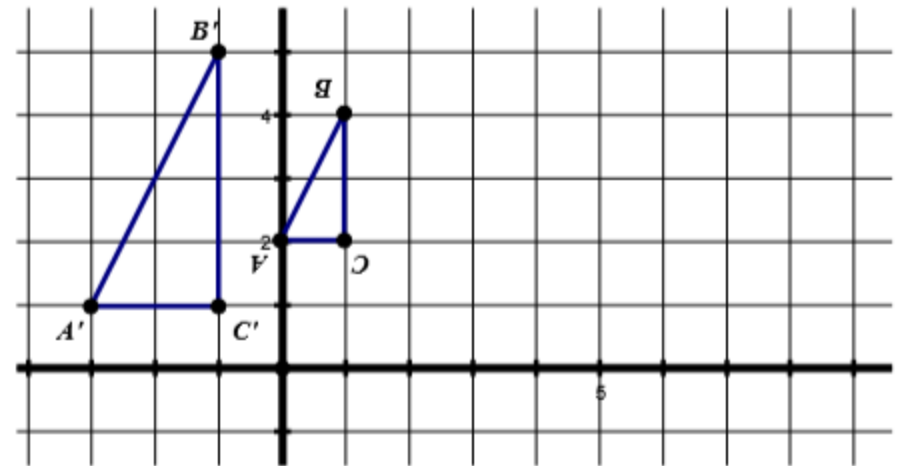
CD is the result of a dilation of segment AB. Find the center of dilation.



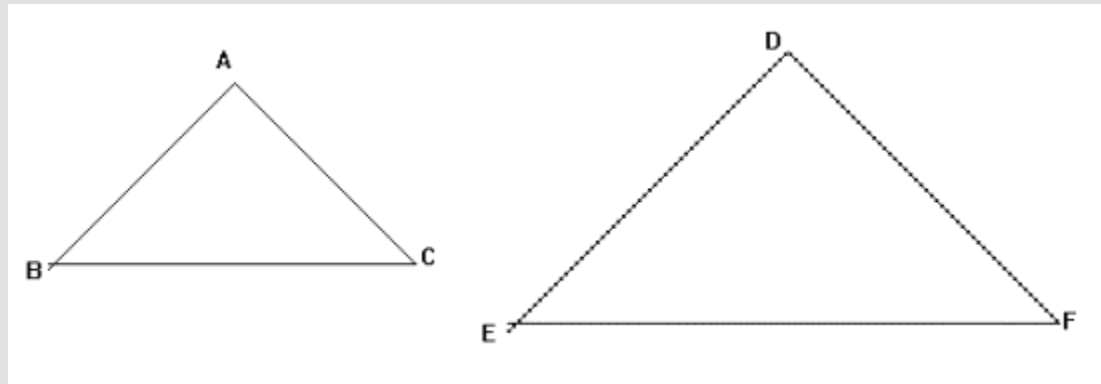
c) Center (_____ , _____) Scale Factor = _____



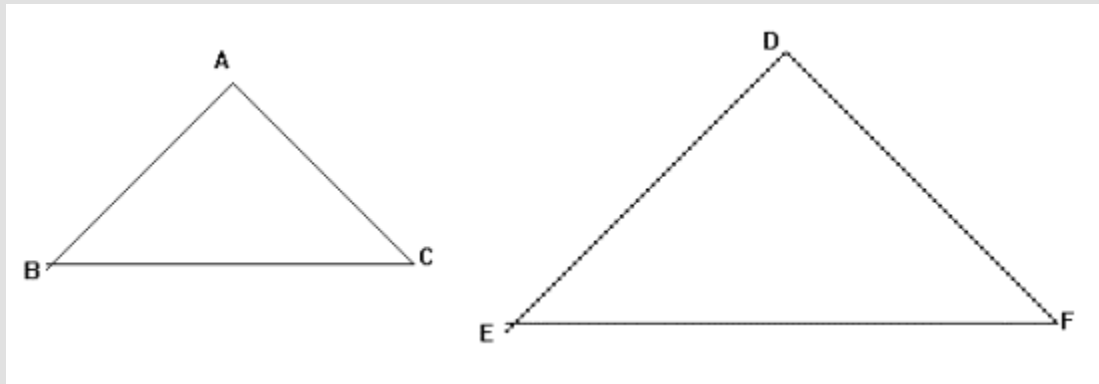
f) Center (_____ , _____) Scale Factor = _____

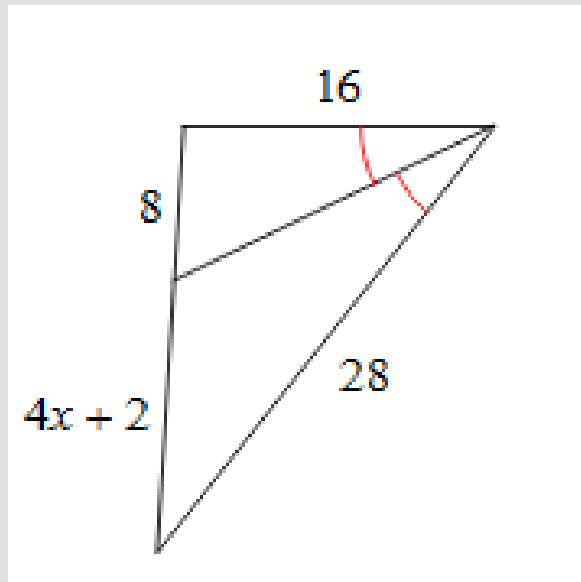
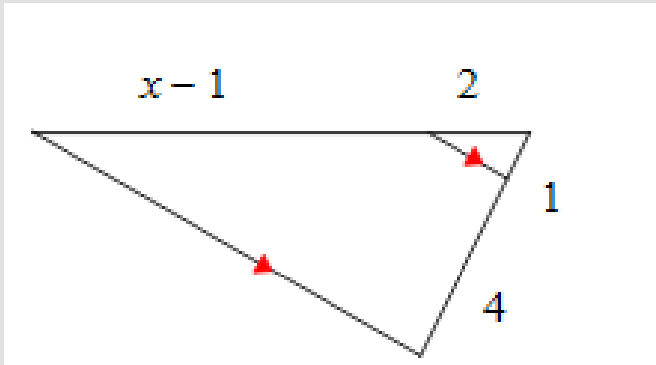


Triangle ABC is dilated by 3 to form Triangle DEF. $DF=12$, Find AC.

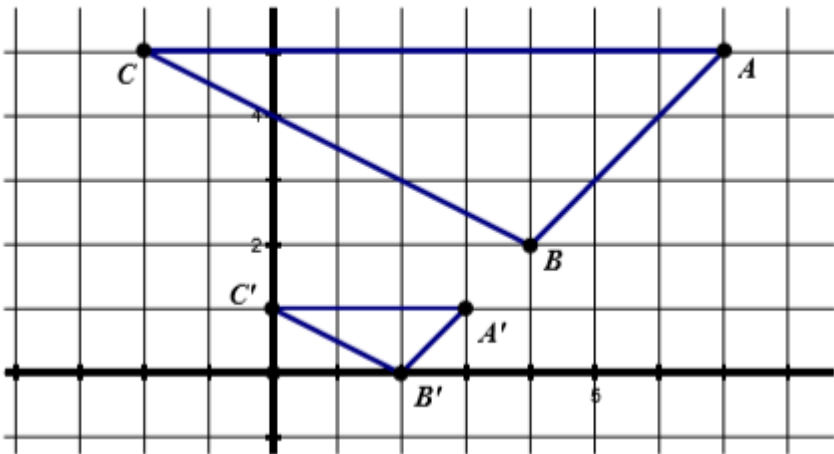


Triangle ABC is dilated by 3 to form Triangle DEF. $m\angle A=80$,
 $m\angle B=50$, find the $m\angle F$

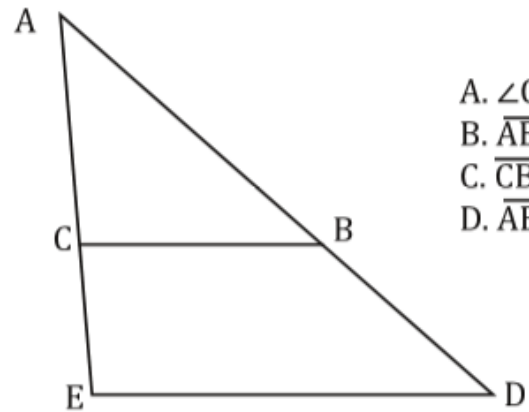




d) Center (_____ , _____) Scale Factor = _____



31. What additional information is necessary to show $\triangle ABC \sim \triangle ADE$ by AA?



- A. $\angle C \cong \angle A$
- B. $\overline{AE} \parallel \overline{AD}$
- C. $\overline{CB} \parallel \overline{ED}$
- D. $\overline{AE} \parallel \overline{CB}$