

Good afternoon: attach warm up to notebooks

1. Suppose  $\triangle CHS \sim \triangle TEN$  (not shown). Evaluate each as true or false.

[F]  $\angle C \cong \angle N$

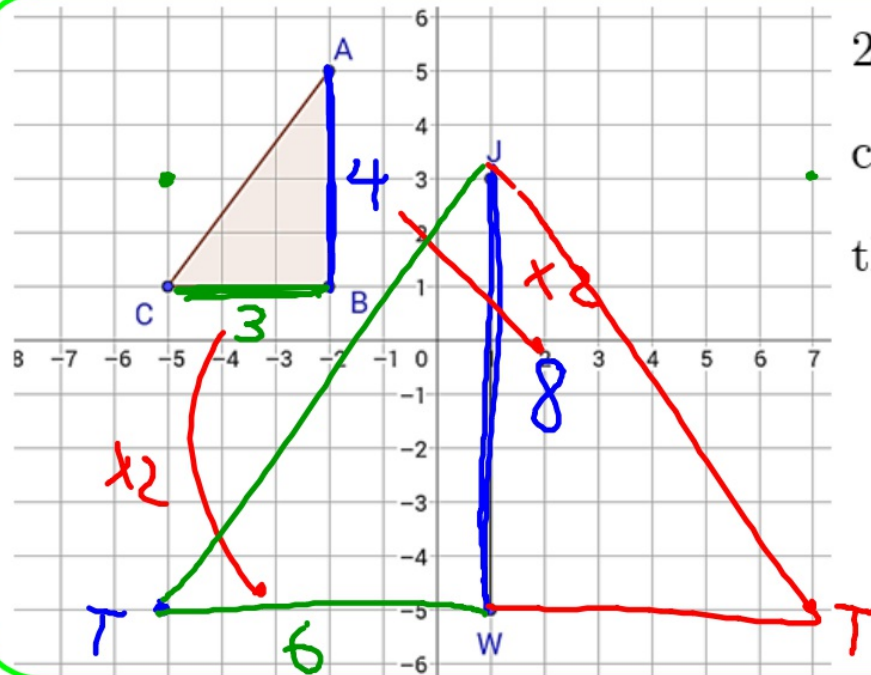
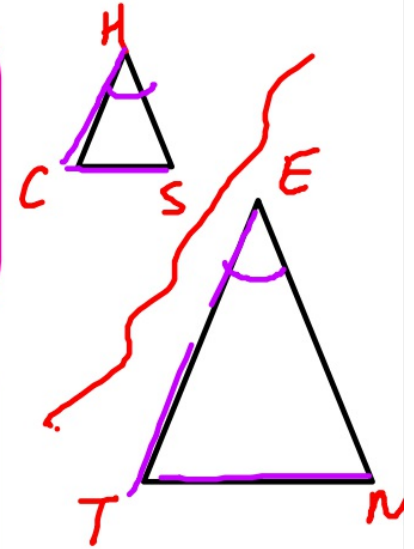
[F]  $\frac{HS}{EN} = \frac{ET}{HC}$  ?

[T]  $\angle H \cong \angle E$

[T]  $\frac{CH}{TE} = \frac{SC}{NT}$

[T]  $\frac{SC}{CH} = \frac{NT}{TE}$

[F]  $\frac{TN}{SC} = \frac{HC}{ET}$



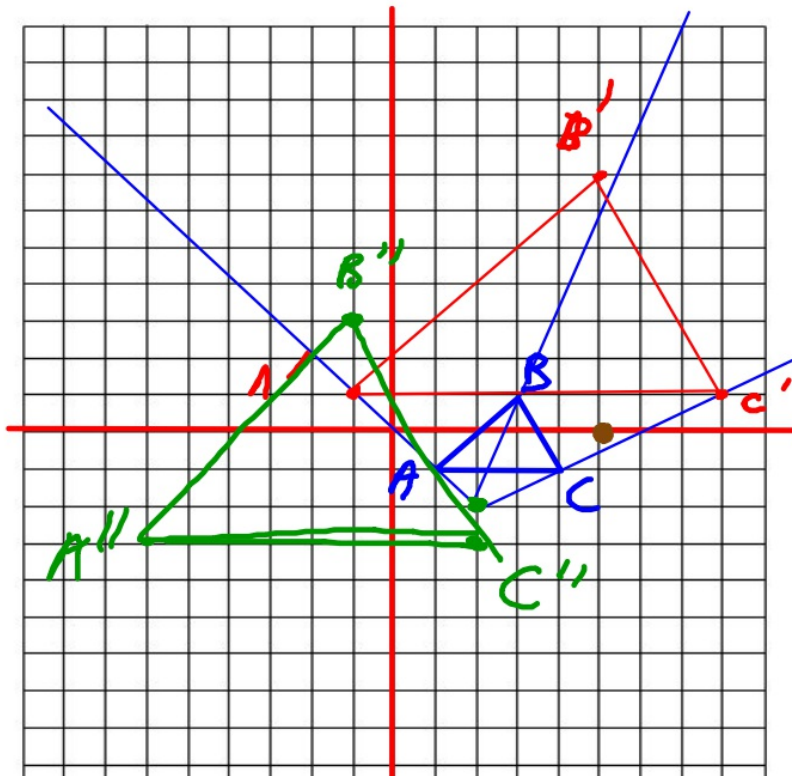
2 Find all possible coordinates for T such that  $\triangle ABC \sim \triangle JWT$

Reminder  
tutoring? Tues &  
first Q3  
assessment  
Thursday 1/18

# Dilations *not* centered at the origin

NOTES

Consider  $\triangle ABC$  with  $A(1,-1)$ ,  $B(3,1)$  and  $C(4,-1)$ . Dilate  $\triangle ABC$  about the point  $(2,-2)$  with scale factor 3.



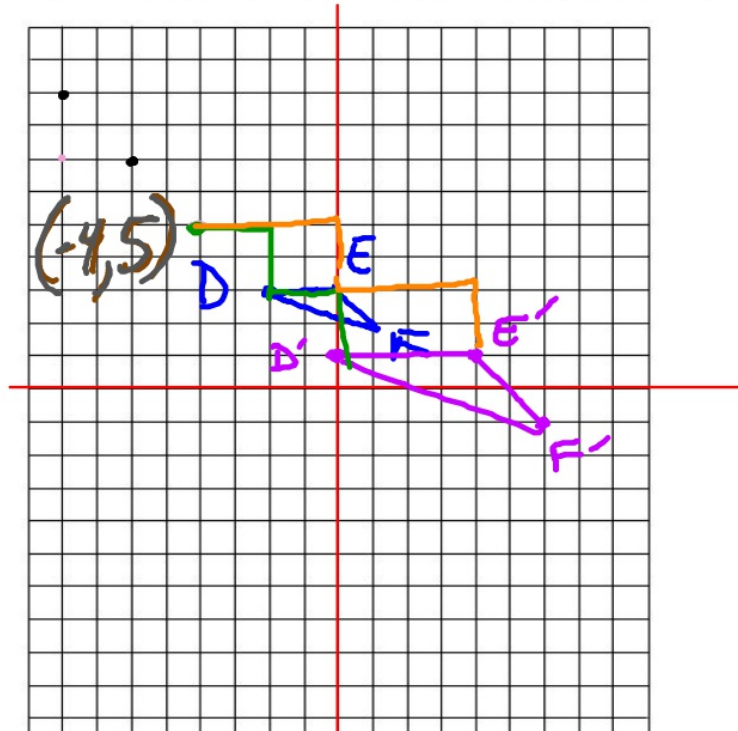
Repeat for center  $(5,0)$ .



Suppose  $\triangle DEF$  has coordinates  $D(-2,3)$   $E(0,3)$  and  $F(1,2)$  and  $\triangle D'E'F'$  has coordinates  $D'(0,1)$ ,  $E'(4,1)$ , and  $F'(6,-1)$ .

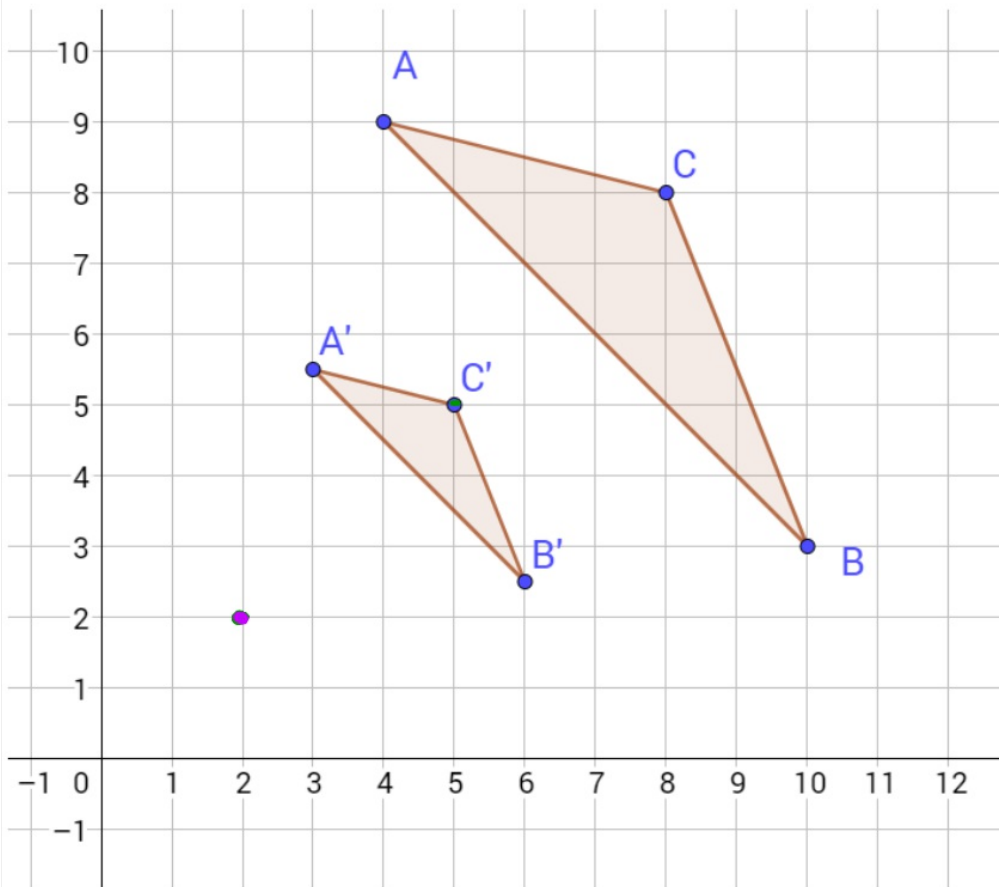
$(DEF)'$

Determine the center of dilation and the scale factor.



Scale is  
2

Determine the center of dilation and the scale factor.



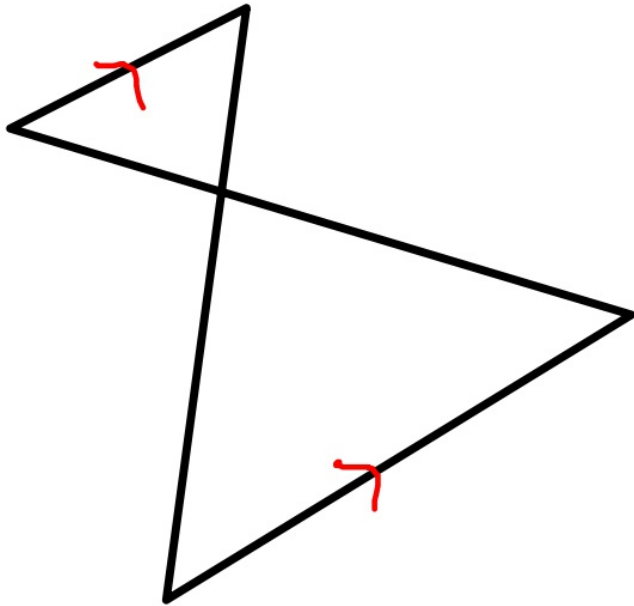
Center:  $(2, 2)$

Scale factor:  $\frac{1}{2}$

Share with your face/elbow partner  
something you've learned so far today.

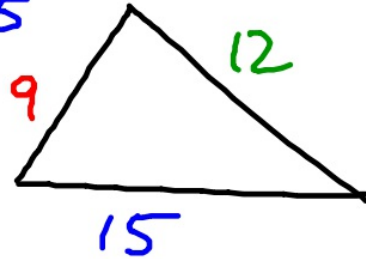
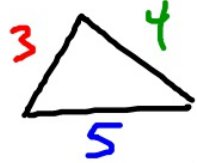
## Triangle Similarity Criteria

Are these triangles similar?



# What is needed for similar triangles? (Similarity Criteria)

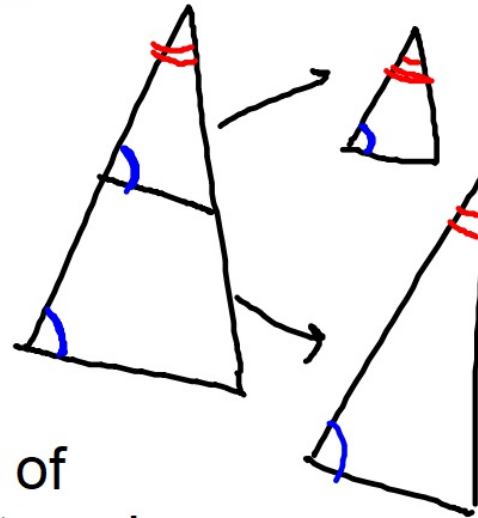
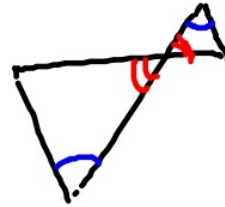
SSS~



$$\frac{9}{3} = \frac{12}{4} = \frac{15}{5}$$

All 3 side pairs  
in equal proportion

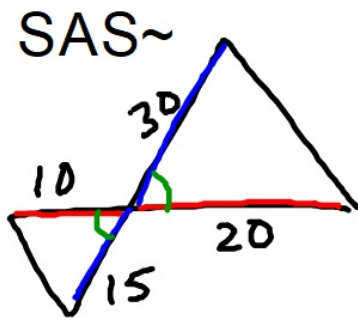
AA~



Two pairs of  
congruent angles

watch out for vertical,  
alt. interior, and shared  
angles.

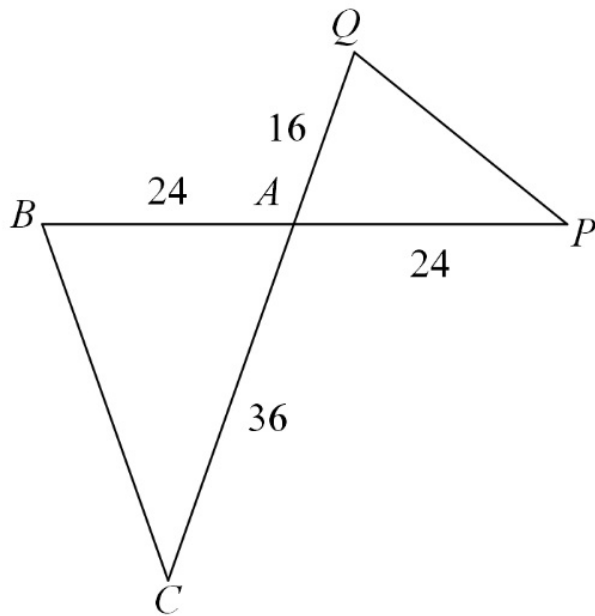
SAS~



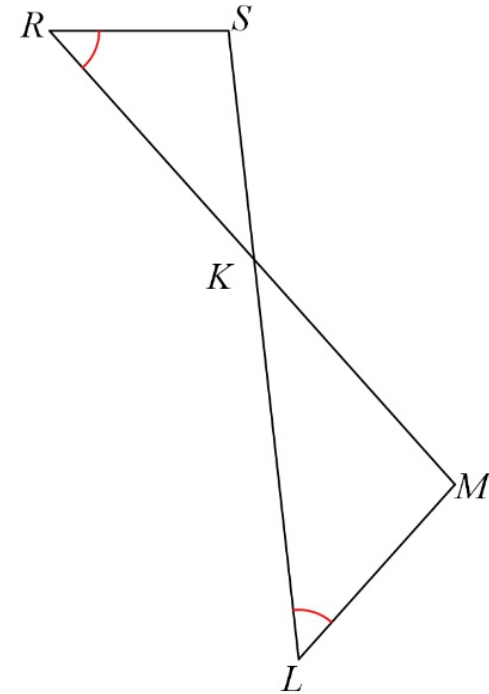
Two side pairs in  
equal proportion  
AND included angles  
are congruent



Are they similar? Give your reasoning and complete the similarity statement.

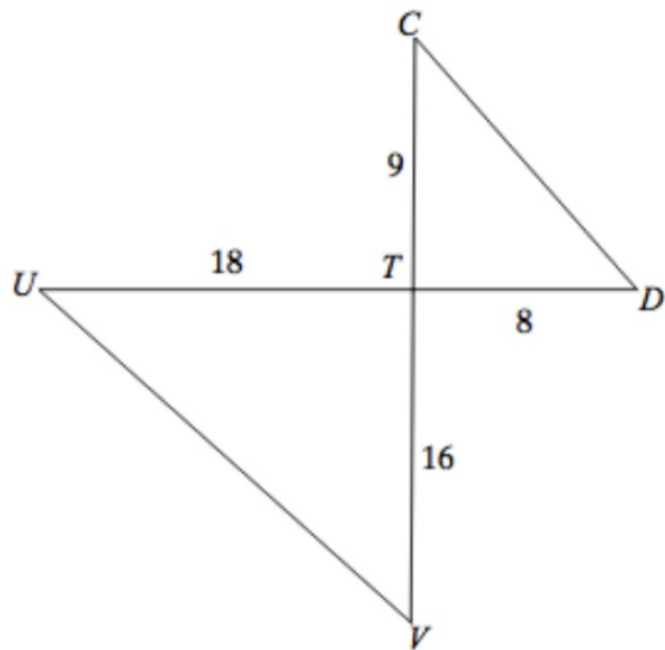


$\triangle ABC \sim$  \_\_\_\_\_



$\triangle KLM \sim$  \_\_\_\_\_

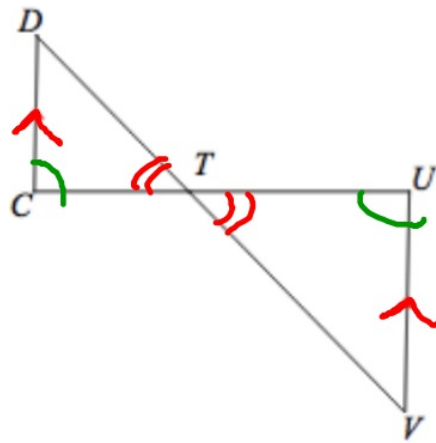
Are they similar?



- A yes by SSS~
- B yes by AA~
- C yes by SAS~
- D not similar
- E I don't know yet

answer: C

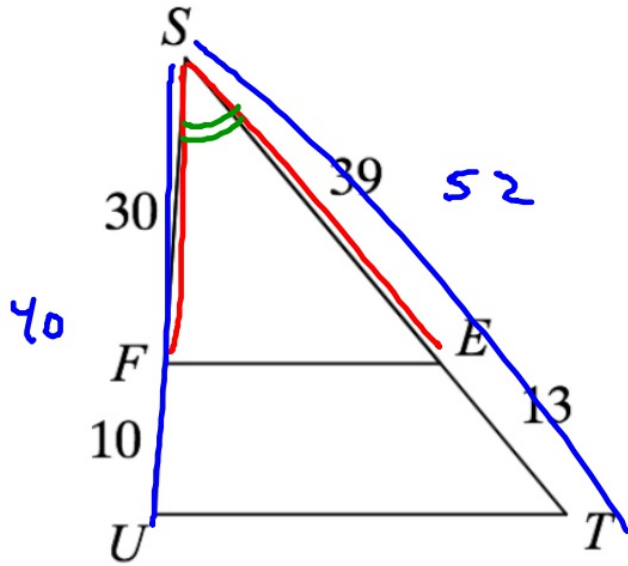
Are they similar?



- A yes by SSS~
- B yes by AA~
- C yes by SAS~
- D not similar
- E I don't know yet

answer: B

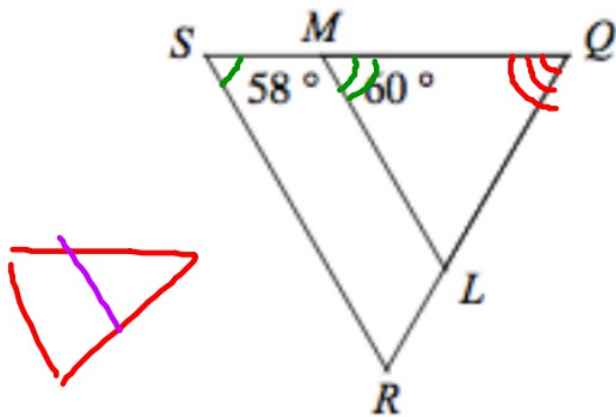
Are they similar?



- A yes by SSS~
- B yes by AA~
- C yes by SAS~
- D not similar
- E I don't know yet

Are they similar?

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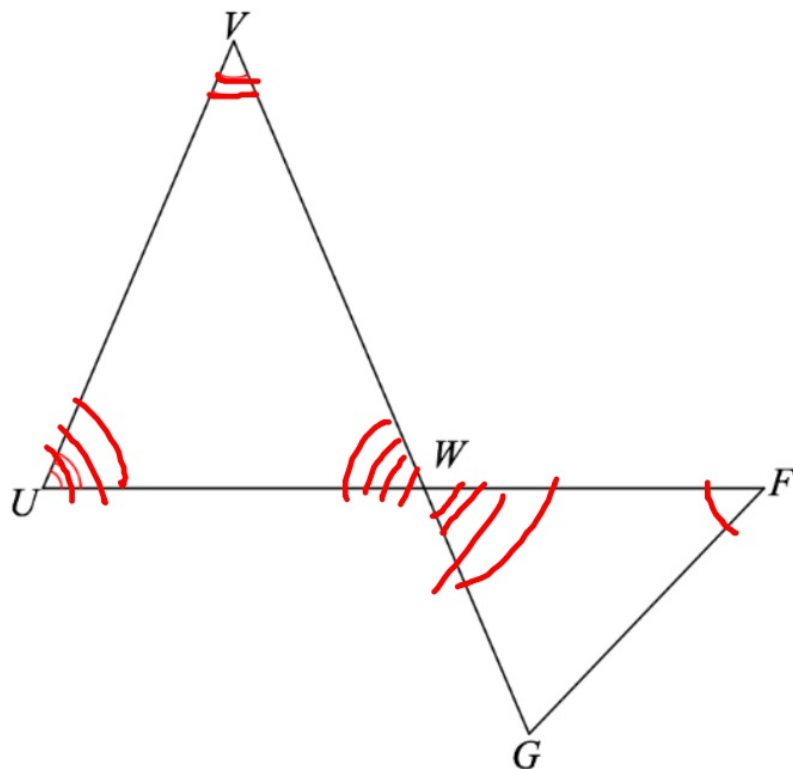


- A yes by SSS~
- B yes by AA~
- C yes by SAS~
- D not similar
- E I don't know yet

answer: D

Are they similar?

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A yes by SSS~

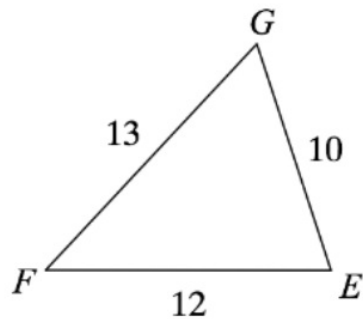
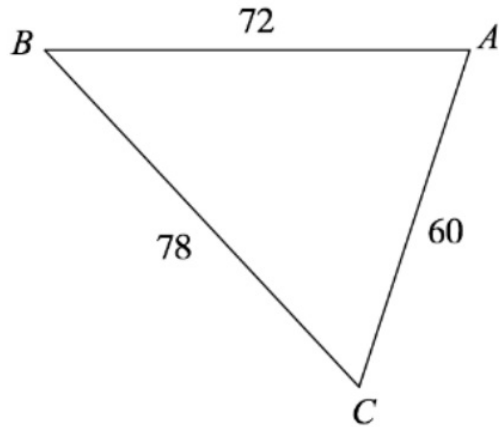
B yes by AA~

C yes by SAS~

**D** not similar

E I don't know yet

Are they similar?

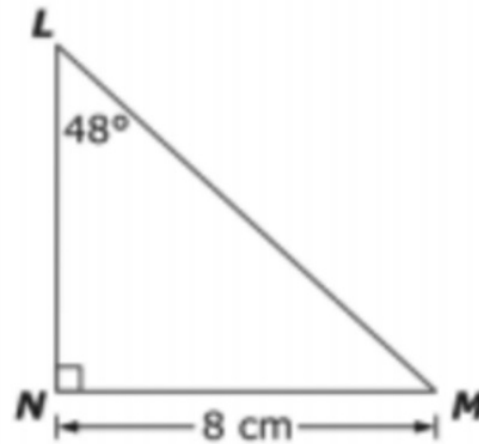
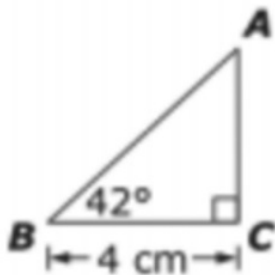


A yes by SSS~  
B yes by AA~  
C yes by SAS~  
D not similar  
E I don't know yet

answer: A

Are they similar?

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- A yes by SSS~
- B yes by AA~
- C yes by SAS~
- D not similar
- E I don't know yet

answer: B



HW

p.260 #7-14

video examples to help with hw always @ [mgeo.weebly.com](http://mgeo.weebly.com)