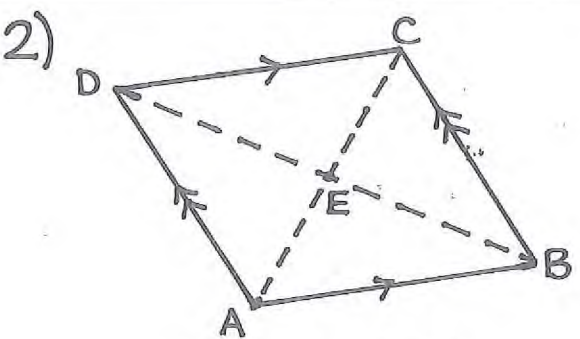


$$\overline{33} = \overline{100} = \overline{50}$$

Name: \_\_\_\_\_

**PARALLELOGRAMS AND SIMILARITY QUIZ #29**

1) Define similarity in terms of similarity transformations.  
Two figures are similar if...

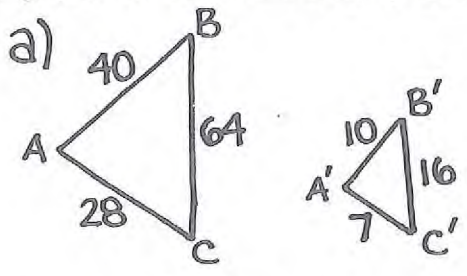


$m\angle CDA = 45^\circ$   
 $BC = 30$   
 $AB = 28$   
 $AE = 10$   
 $DB = 40$

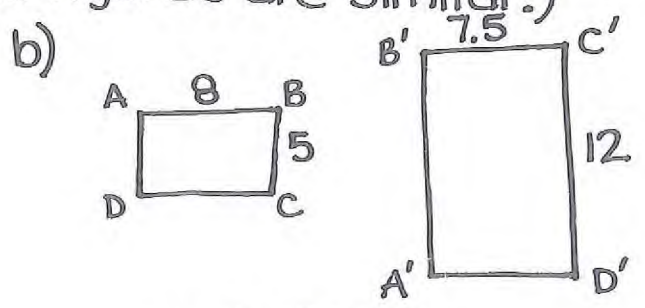
Find the length or angle measure.

- a)  $AD =$  \_\_\_\_\_
- b)  $EC =$  \_\_\_\_\_
- c)  $m\angle DCB =$  \_\_\_\_\_
- d)  $ED =$  \_\_\_\_\_
- e)  $m\angle DAB =$  \_\_\_\_\_
- f)  $BE =$  \_\_\_\_\_
- g)  $DC =$  \_\_\_\_\_
- h)  $m\angle CBA =$  \_\_\_\_\_
- i)  $AC =$  \_\_\_\_\_

3) Find the scale factor. (The figures are similar.)

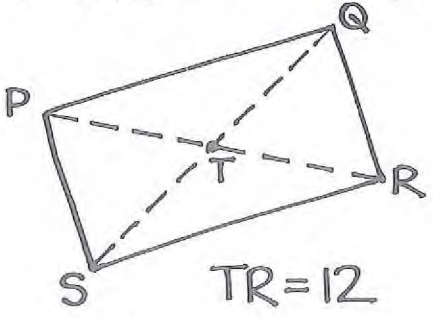


scale factor = \_\_\_\_\_



scale factor = \_\_\_\_\_

4) PQRS is a rectangle.

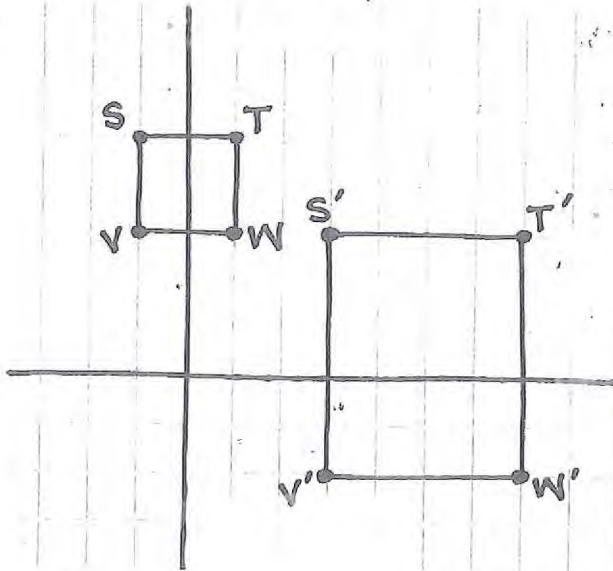


Find the length or angle measure.

- a)  $QS =$  \_\_\_\_\_
- b)  $m\angle PSR =$  \_\_\_\_\_
- c)  $PT =$  \_\_\_\_\_
- d)  $TS =$  \_\_\_\_\_

1) Are the figures similar? Explain why or why not using the definition of similarity in terms of similarity transformations.

a)



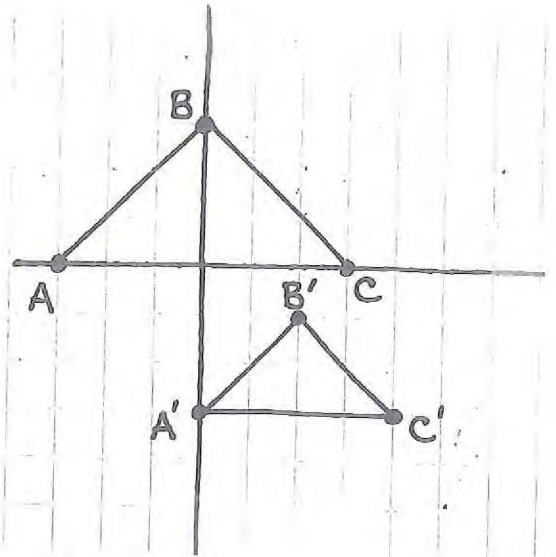
They \_\_\_\_\_ similar because \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

b)



They \_\_\_\_\_ similar because \_\_\_\_\_

\_\_\_\_\_

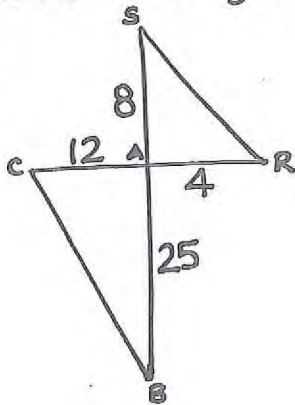
\_\_\_\_\_

\_\_\_\_\_

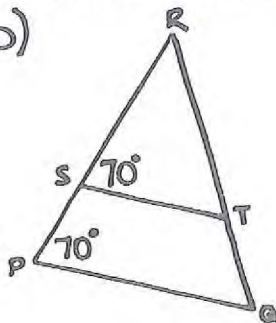
6) State if the two triangles are similar. If they are, **SHOW YOUR WORK!** State how you know. (Hint: Triangle similarity Theorems.)

SHOW YOUR WORK!

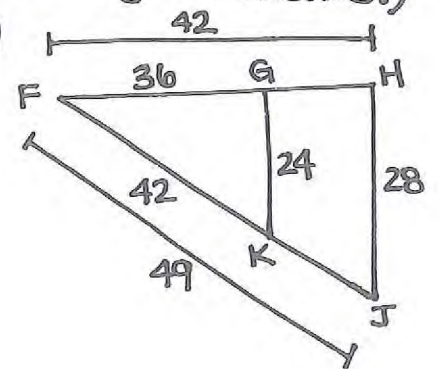
a)



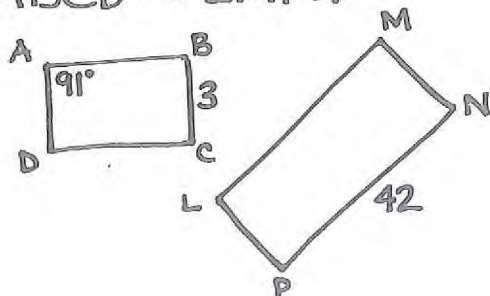
b)



c)



7)  $ABCD \sim LMNP$



The scale factor from ABCD to LMNP is 6.

$MN =$  \_\_\_\_\_

$DC =$  \_\_\_\_\_

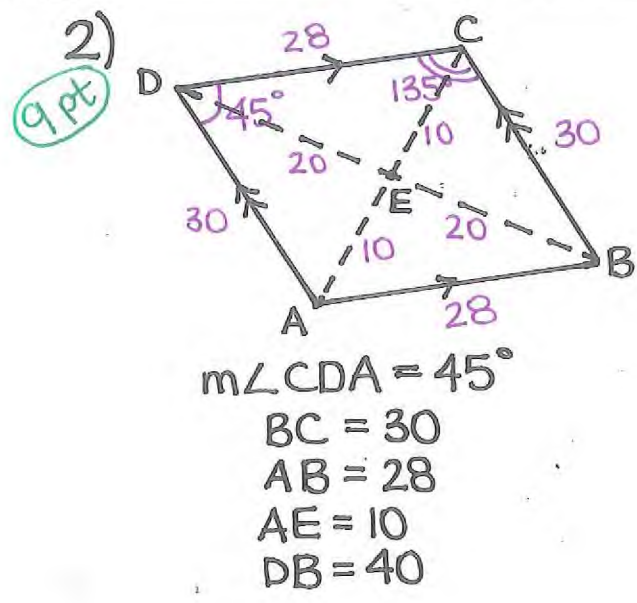
$m\angle L =$  \_\_\_\_\_

$31 \overline{33} = \overline{100} = \overline{50}$

Name: Key

**PARALLELOGRAMS AND SIMILARITY QUIZ #29**

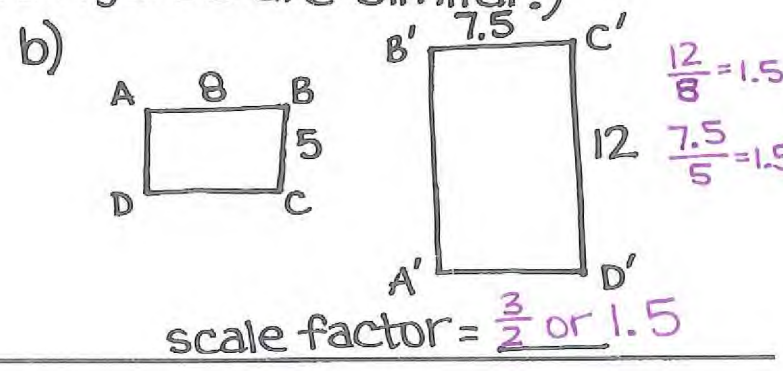
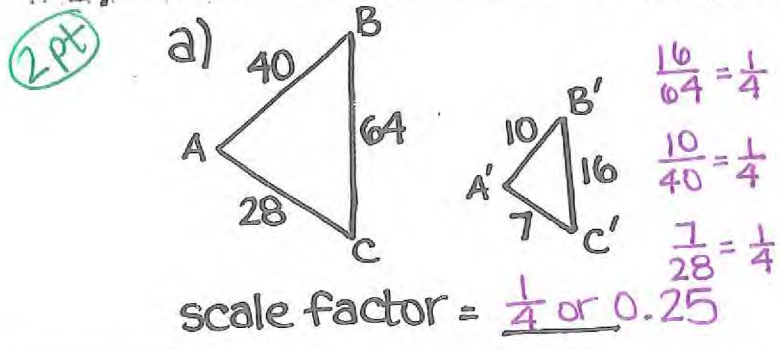
2pt) Define similarity in terms of similarity transformations. Two figures are similar if... there is a sequence of similarity transformations that maps one figure onto the next.



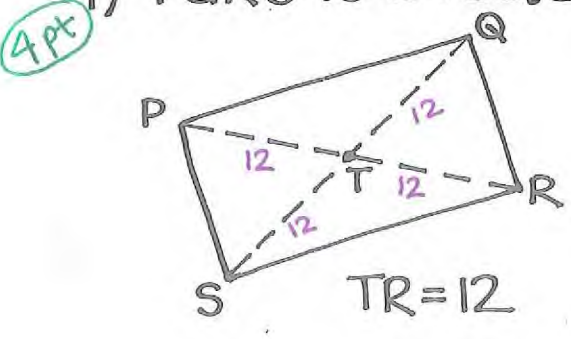
Find the length or angle measure.

- a)  $AD = \underline{30}$
- b)  $EC = \underline{10}$
- c)  $m\angle DCB = \underline{135^\circ}$
- d)  $ED = \underline{20}$
- e)  $m\angle DAB = \underline{135^\circ}$
- f)  $BE = \underline{20}$
- g)  $DC = \underline{28}$
- h)  $m\angle CBA = \underline{45^\circ}$
- i)  $AC = \underline{20}$

3) Find the scale factor. (The figures are similar.)



4) PQRS is a rectangle.



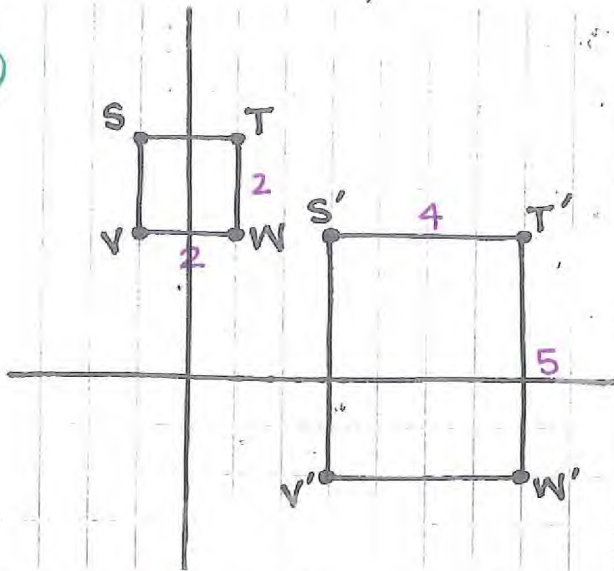
Find the length or angle measure.

- a)  $QS = \underline{24}$
- b)  $m\angle PSR = \underline{90^\circ}$
- c)  $PT = \underline{12}$
- d)  $TS = \underline{12}$

[17 pts]

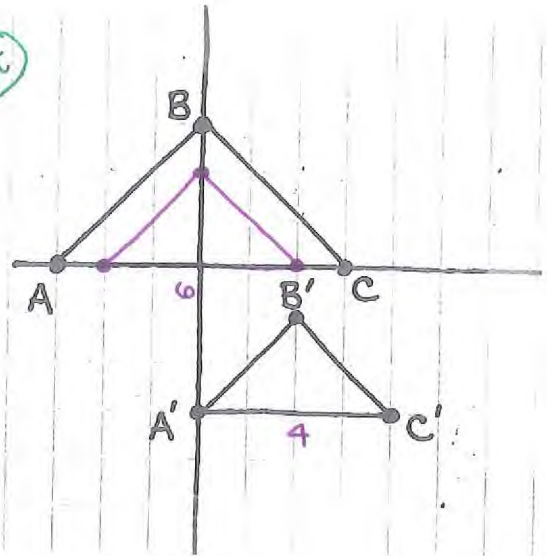
5) Are the figures similar? Explain why or why not using the definition of similarity in terms of similarity transformations.

a) 3 pt



They are not similar because there is no sequence of similarity transformations that will map STWV onto S'T'W'V'.

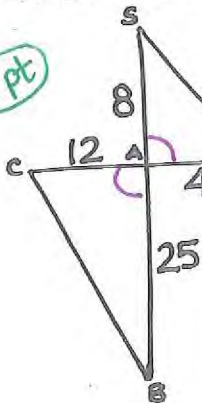
b) 3 pt



They are similar because  $\triangle ABC$  was dilated by a factor of  $\frac{2}{3}$  and translated down 3 units + ~~and~~ right 2 units to create  $\triangle A'B'C'$ .

6) State if the two triangles are similar. If they are, SHOW WORK! State how you know. (Hint: Triangle similarity Theorems.)

a) 2 pt

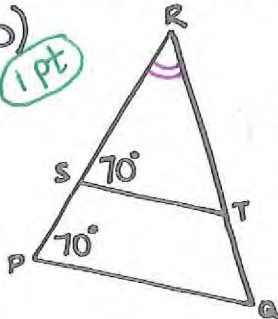


$\frac{12}{4} = \frac{25}{8}?$   
 $3 = 3.125 \times$

OR  
 $\frac{4}{12} = \frac{8}{25}?$   
 $.33 \quad .32 \times$

NO

b) 1 pt



yes, AA similarity

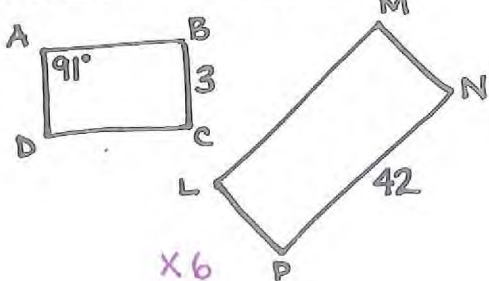
c) 2 pt

$\frac{42}{36} = \frac{28}{24} = \frac{49}{42}$   
 $1.16 \quad 1.16 \quad 1.16$

OR  
 $\frac{36}{42} = \frac{24}{28} = \frac{42}{49}$   
 $.857 \quad .857 \quad .857$

yes, SSS or SAS similarity

7)  $ABCD \sim LMNP$



The scale factor from ABCD to LMNP is 6.

$MN = \underline{18}$

$DC = \underline{7}$

$m\angle L = \underline{91^\circ}$

[4 pts]