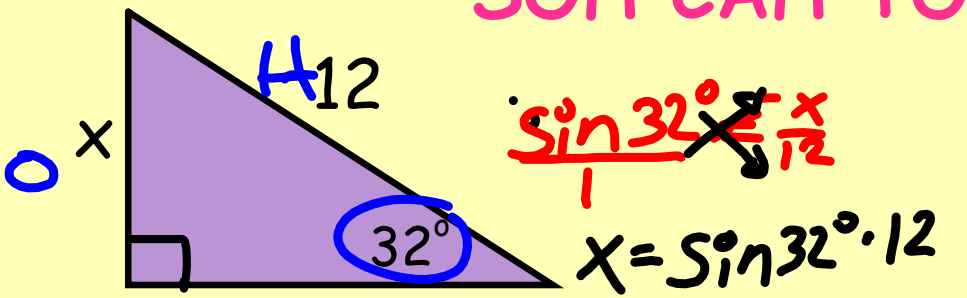
2/25/20 - Warm Up Problem

Use trigonometry to find the value of x.

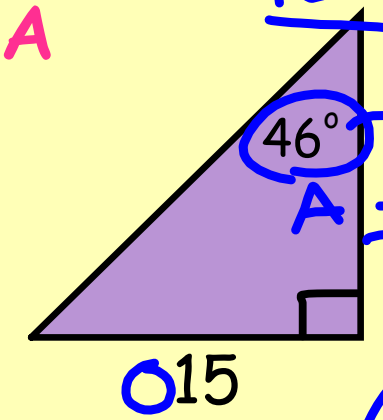
SOH CAH TOA



$\frac{\sin 32°}{1} = \frac{x}{12}$

$x = \sin 32° \cdot 12$

$x = 6.35$



$\frac{\tan(46)}{1} = \frac{15}{x}$

$\tan(46)\,x = 15$

$x = \frac{15}{\tan 46}$

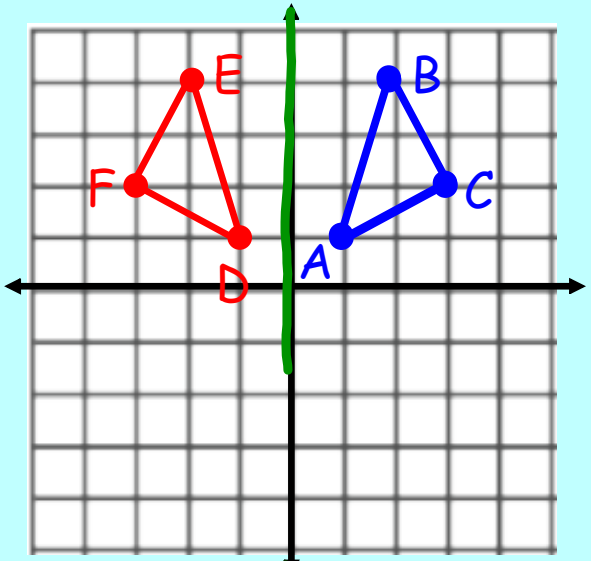
$x = \frac{15}{\tan(46)}$

14.4

Concept 21 - Congruence Transformations

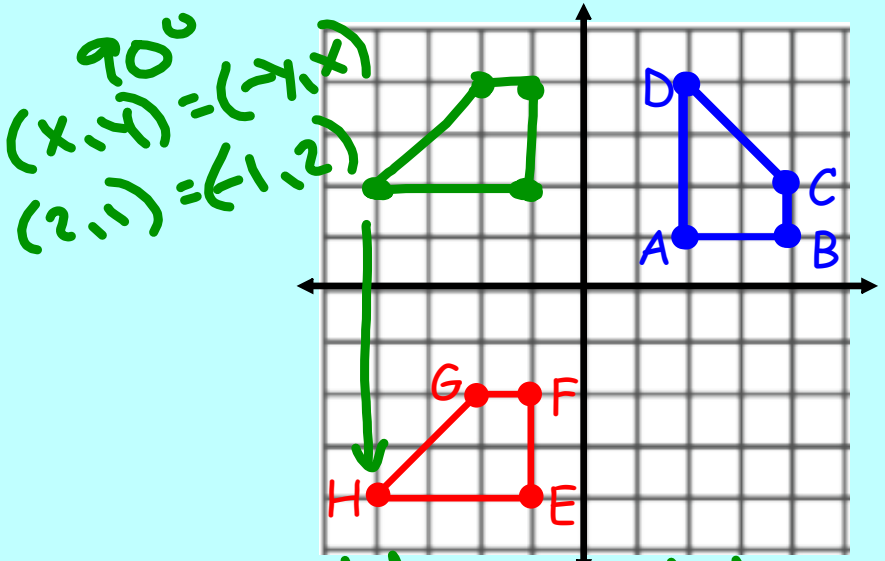
Goal: Identify and use compositions of transformations

Is ΔABC congruent to ΔDEF?



Yes - Reflect over y-axis

Is ABCD congruent to EFGH?



Yes rotate 90°
Translate 6 down

Congruence Transformation:

Two figures are congruent if and only if there is a sequence of one or more rigid motions that maps one figure onto the other.

→ translation
reflection
rotation

Composition: A combination of two or more transformations

$$T_{\langle 0,-6\rangle}(r_{(90,\,O)}(ABCD))$$

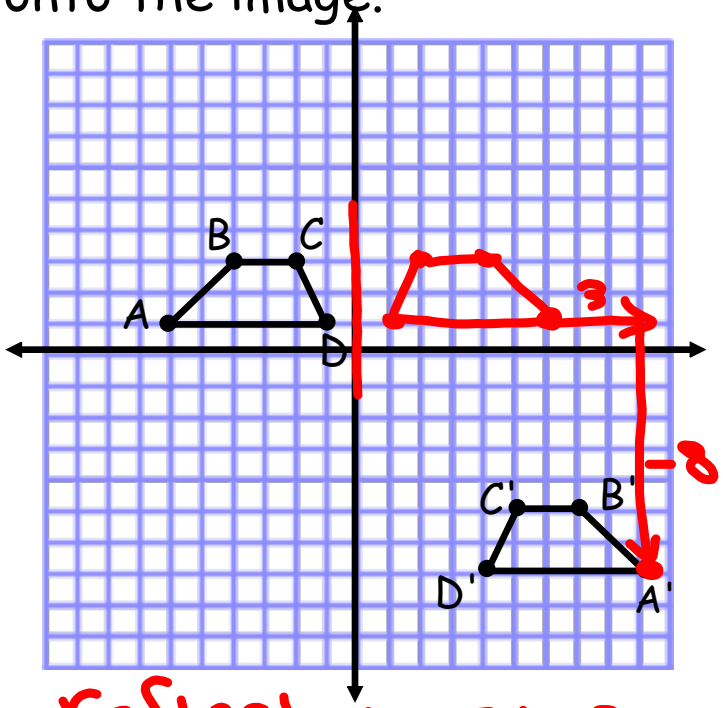
or

$$(T_{\langle 0,-6\rangle} \circ r_{(90,\,O)})(ABCD)$$

2nd 1st

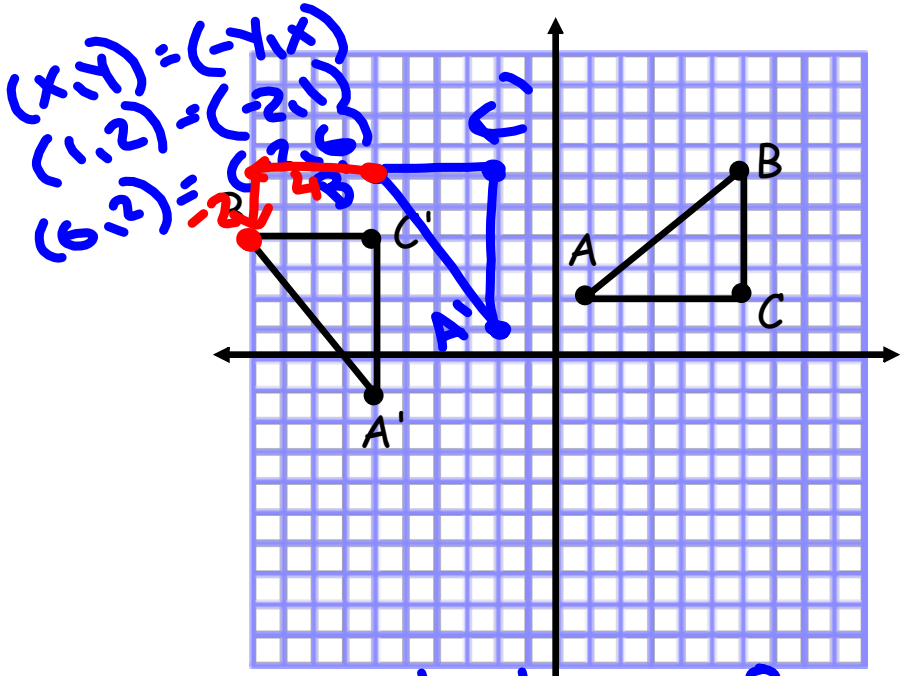
In your notes:

Write a composition of transformations that maps the preimage onto the image.



reflect y-axis
Translate 3 right, 8 down

$(T_{\langle 3,-8\rangle} \circ R_{y\text{-axis}})(ABCD)$



rotate 90°
Translate 4 left
2 down

$(T_{\langle -4,-2\rangle} \circ r_{(90°,0)})$

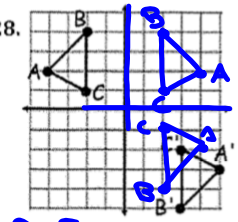
Assignment:

Concept 21 Worksheet (#28-36)

CONGRUENCE TRANSFORMATIONS

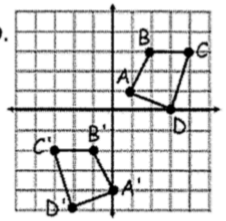
Write a transformation or composition of transformations that maps the preimage onto the image.

28.

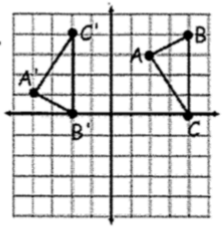


Reflect y-axis
Reflect x-axis
Translate 1 right
1 down

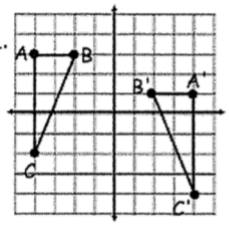
29.



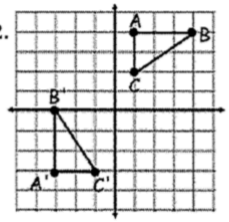
30.



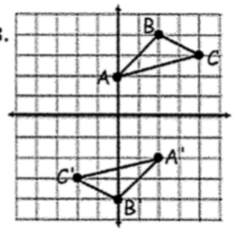
31.



32.

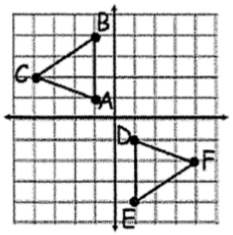


33.

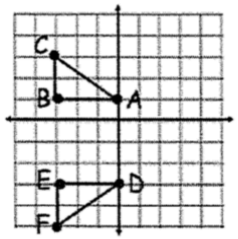


Write a transformation or composition of transformations that would map Triangle ABC onto Triangle DEF.

34.



35.



36.