Name: Key Teacher: _____

Date: _____

Unit 2 – TEST 2 Review

Lessons 12-21

Work every problem to the best of your ability. Show all work. Circle your answers.

1. Define a rotation.

movement about a fixed pt in degrees

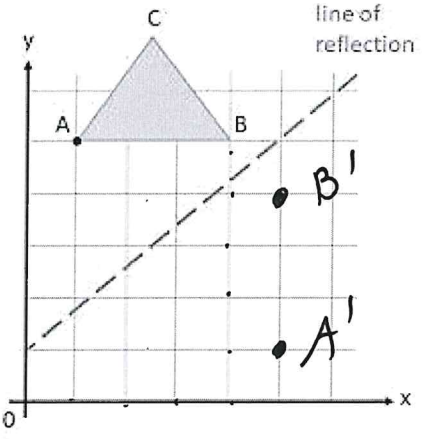
2. Define a reflection

mirror image

3. Define a translation.

Slide movement

Find the Reflection of the shape below.



B(4,5) B'(5,4)

(x,y) → (y, x)

A(1,5) A'(5,1)

C(2.5,7) C'(7,2.5)

4.) A'(5, 1)

B'(5, 4)

C'(7, 2.5)

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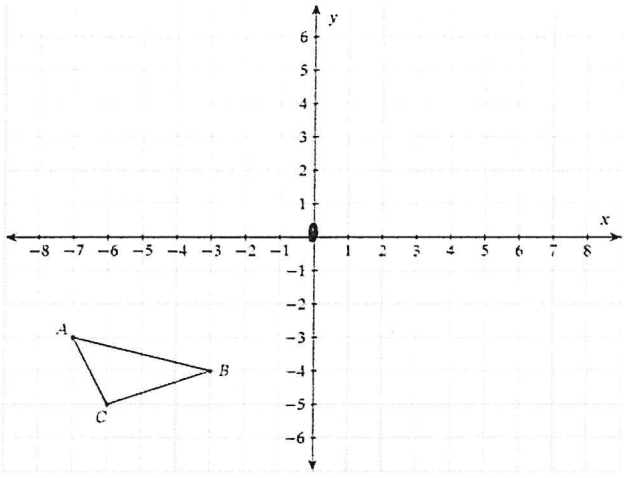
Unit 2 – TEST 2 Review

Lessons 12-21

Rotate the following shape 90 degrees clockwise around the origin, then write the new image coordinates.



5.) A' (,) B'(,) C' (,)

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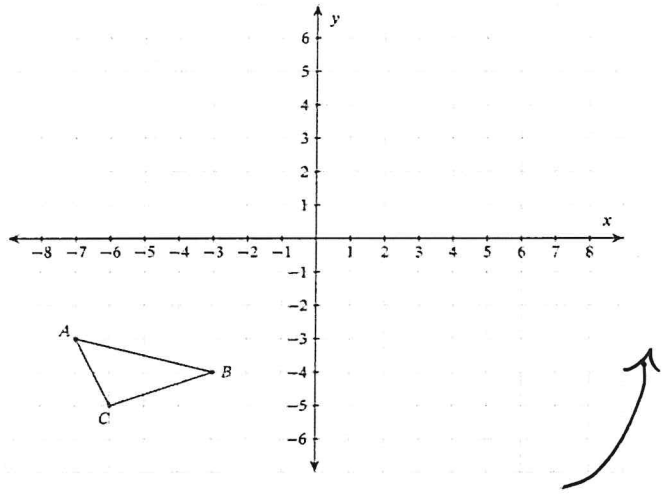
Unit 2 – TEST 2 Review

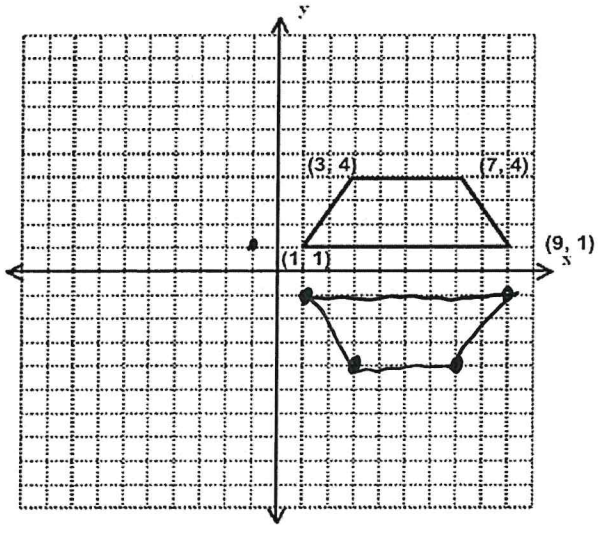
Lessons 12-21

Rotate the shape 60 degree clockwise around the origin, then write the new image coordinates.



6.) A' (,) B'(,) C' (,)

7.) Draw the reflection of the shape below across the X-axis and list the coordinates. (y-change)



(1,1) → (1, -1)

(3,4) → (3, -4)

(7,4) → (7, -4)

(9,1) → (9, -1)

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Unit 2 – TEST 2 Review

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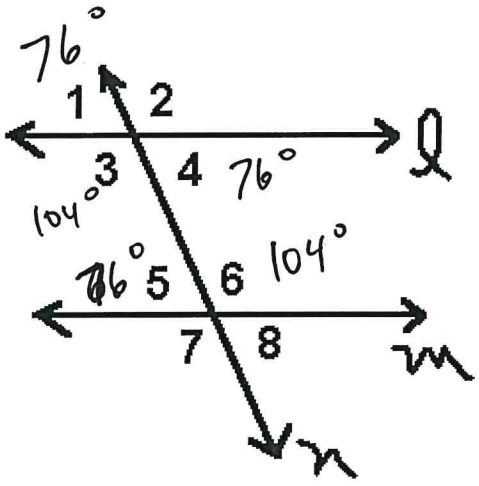
(1,-1) (3,-4) (7,-4) (9,-1)

Find the measure of each angle. List the reason you used to determine the angle measure.

Given angle m<6 is 104 degrees.



8. m<1 = 76° Reason and angle you connected to = corr. to ∠5

9. m<5 = 76° Reason and angle you connected to = Supp to ∠6

10. m<4 = 76° Reason and angle you connected to = alt int ∠'s to ∠5

11. m<8 = 76° Reason and angle you connected to = Supp to ∠6

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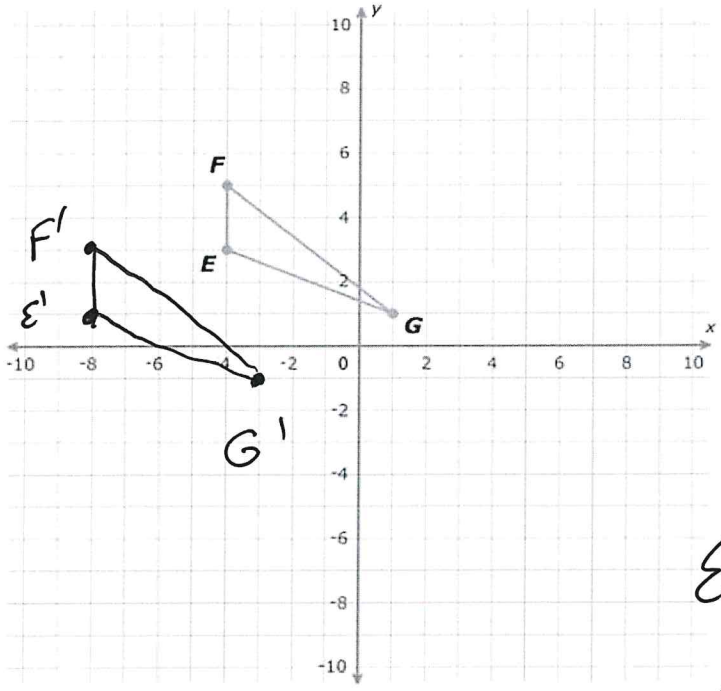
Unit 2 – TEST 2 Review

Lessons 12-21

12.) Find the new image using the pre-image.

Graph the image of ΔEFG after a translation 4 units left and 2 units down.



E' (-8, 1) F'(-8, 3) G'(-3, -1)

E(-4, 3)

F(-4, 5)

G(1, 1)

E'(-4-4, 3-2)

E'(-8, 1)

F(-4-4, 5-2)

(-8, 3)

G(1-4, 1-2)

(-3, -1)

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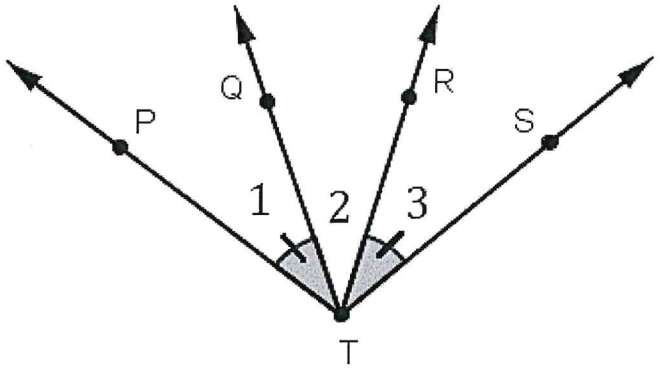
Unit 2 – TEST 2 Review

Lessons 12-21

13.) Complete the proof

Given> see visual

Prove > <1 is congruent to angle 3



Statements	Reasons
1) See Above	1) Given
2) m<1 + m<2 = m<2 + <3	2) corr. <s ≅
3) m<1 ≅ <3	3) transitive prop.

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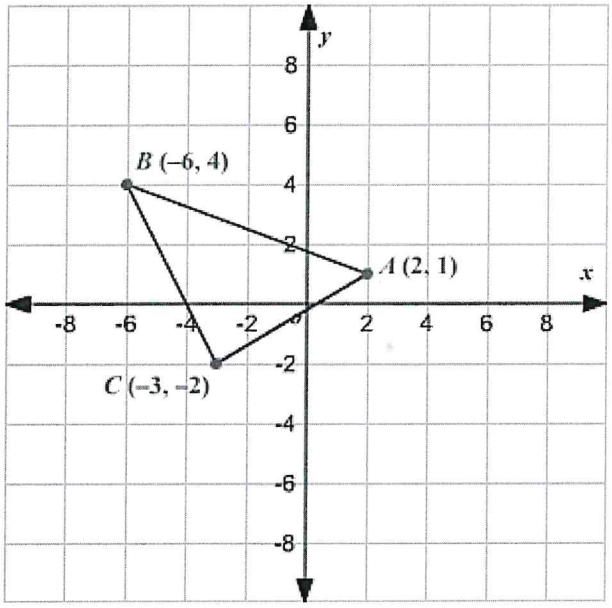
Unit 2 – TEST 2 Review

Lessons 12-21

14.) 2 transformations. Draw the first new image with a reflection on the y-axis. Then create the next new image with a translation of left 2 and down 1.



1st New Image:

A' (,) B' (,) C'(,)

2nd New Image

A" (,) B"(,) C"(,)

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Unit 2 – TEST 2 Review

Lessons 12-21

15.) What would the coordinates be for a reflection of these coordinates across the x-axis?

A(7, 13)	A'(7, -13)
B(2, -5)	B'(2, 5)
C(2, 1)	C'(2, -1)
D(8, -7)	D'(8, 7)

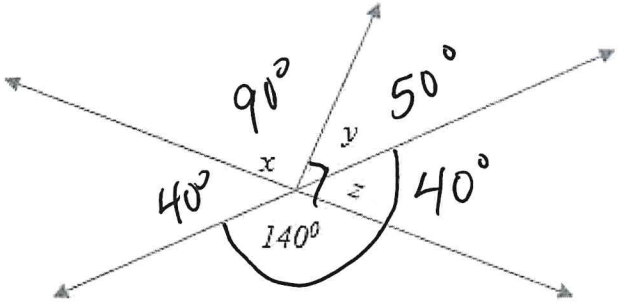
y-change

16.) What is the rule for reflections across the x-axis?

$(x, y) \rightarrow (x, -y)$

17.) Find the measure of the missing angles.

X= 90° Y= 50° Z= 40° Supp



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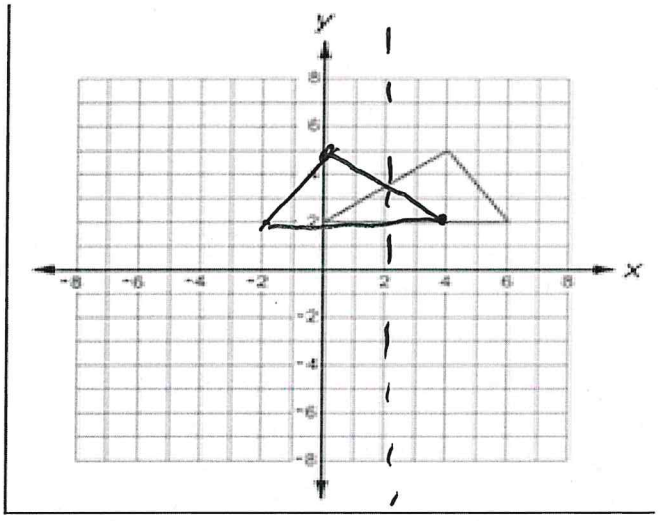
Unit 2 – TEST 2 Review

Lessons 12-21

18.) Reflect across x=2. Draw the new image.

tough one!

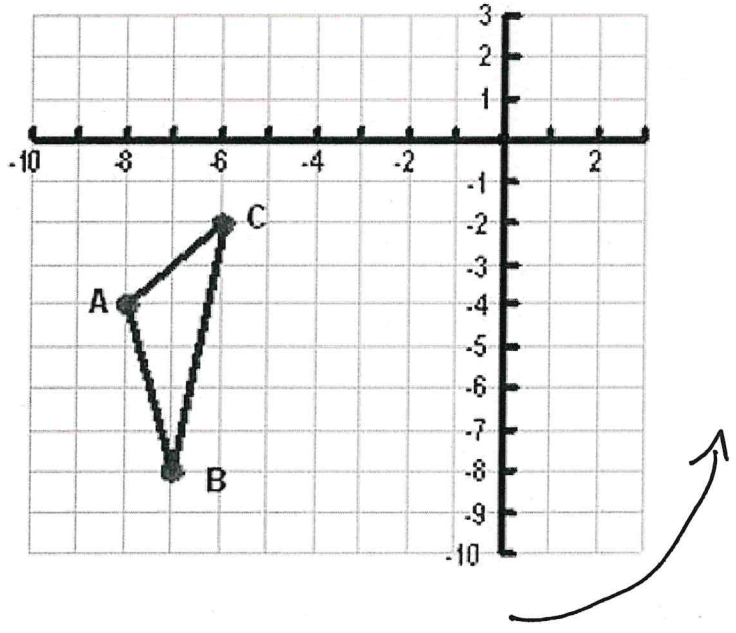


(0,2) → (4,2)

(4,4) → (4,4)

(6,2) → (2,2)

19.) Rotate around origin 45 degrees counterclockwise around the origin.



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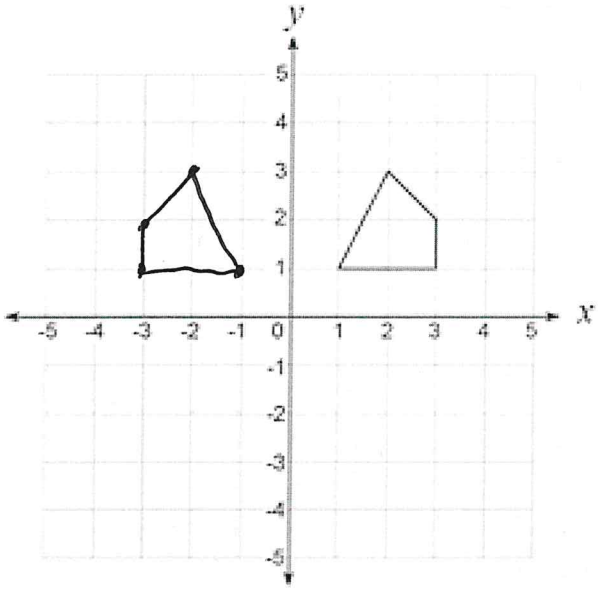
Unit 2 – TEST 2 Review

Lessons 12-21

20.) Complete the reflection across the y-axis.

x-change



(1,1) → (-1,1)

(3,1) → (-3,1)

(3,2) → (-3,2)

(2,3) (-2,3)

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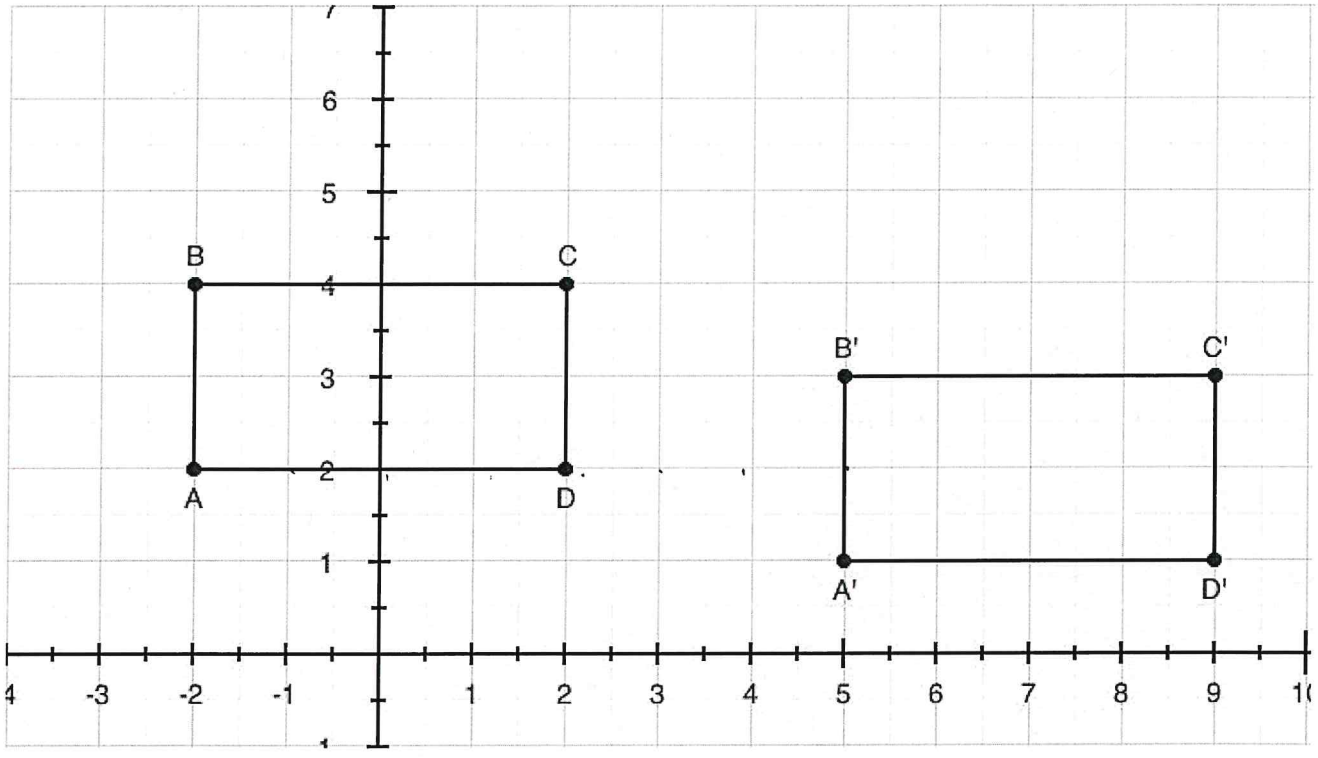
Unit 2 – TEST 2 Review

Lessons 12-21

21.) Write the translation as the following: (x , y)→(x +7 , y −1). Then write all the coordinates for each graph.



A (-2, 2) B (-2, 4) C (2, 4) D (2, 2)

A' (5, 1) B' (5, 3) C' (9, 3) D' (9, 1)

X+7; y-1