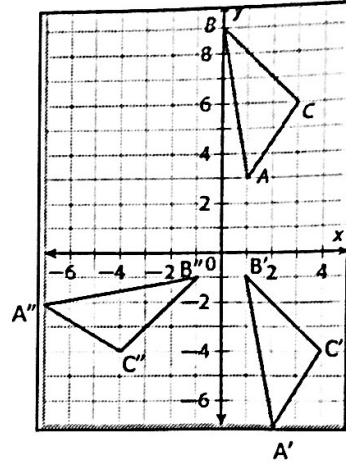
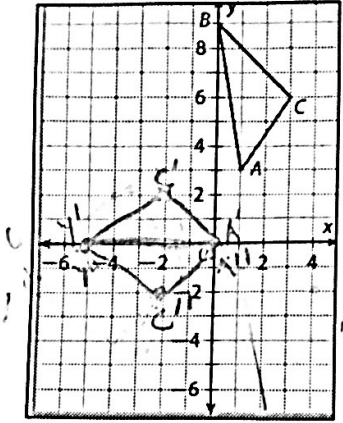


Semester 1 Re-Engagement

6. a) Perform the indicated sequence of transformations on the given pre-image, below left:
 Rotate 90° counterclockwise about the origin, then reflect across the x-axis.



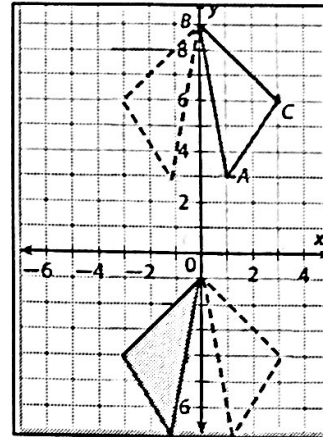
- b) Describe the sequence of transformations that will result in the final image, above right.

The shape was rotated 90° and reflected over x-axis

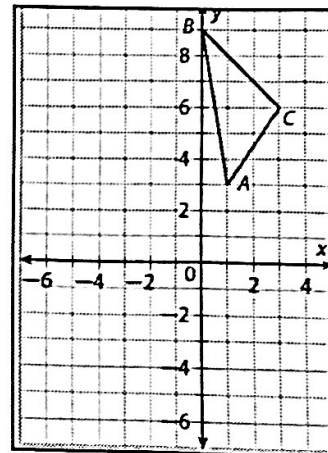
7. Lavern claims that "any sequence of transformations involving one reflection over an axis and one translation will result in the same image," no matter in which order the transformation are executed. (reflection, then translation vs translation first, then reflection). She supports her work as follows.

I. Reflection first: $(x, y) \rightarrow (-x, y) \rightarrow (x, y - 10) \rightarrow (-x, y - 10)$

II. Translation first: $(x, y) \rightarrow (x, y - 10) \rightarrow (-x, y) \rightarrow (-x, y - 10)$



Shirley claims that Lavern's conjecture is not always true. Offer a counterexample for Shirley to use in order to debunk Lavern's claim, or prove that Lavern's statement is always true.



Semester 1 Re-Engagement Theorems and Postulates

8. a) Draw a counterexample for the following statement: For all points A, B and C, $AB + BC = AC$.

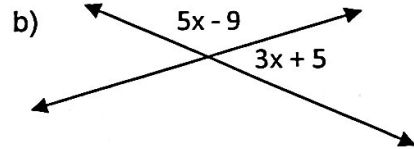
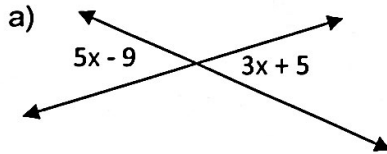
b) What condition must be true in order for $AB + BC = AC$?

9. Hank claims that "the square root of a number is always even." Do you agree or disagree with Hank's conjecture. Support your position.

10. Given the the conditional statement: *If a car is a Mustang, then the car is yellow,*

a) give an instance, b) give a counterexample, if any, c) and write the converse.

11. Solve for x:



13. Describe the the difference between a line, a segment and a ray. Draw an example of each.

14. Draw and lable an example of each of the following:

a) complementary angles that are not adjacent

b) supplementary angles that are not a linear pair

c) Two coplanar lines that are neither parallel, nor perpendicular

Semester 1 Re-Engagement

15. Draw and/or write an example of each of the following:

a) Linear Pair Postulate

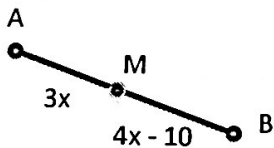
b) Vertical Angle Theorem

c) Segment Addition postulate

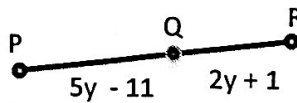
d) Angle Addition Postulate

16. Find the indicated measure

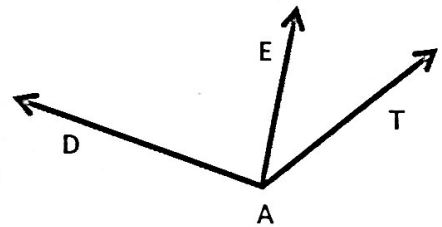
a) AB, given M is the midpoint,



b) PQ, given $PR = 32$



c) $m\angle EAT$, given $m\angle DAE = 85^\circ$,
and $m\angle DAT = 115^\circ$



17. A pole is held vertical by guy wires anchored equal distance from the pole as shown in the diagram. According to the Perpendicular Bisector Theorem, what can you determine to be true?

