1. On a sheet of graphin' paper plot triangle A(-4, 4), B(-8, -3) and C(2, 4).

2. Using Pythagorean Theorem (as needed), find:
   a. AB =
   b. AC =
   c. BC =

3. Dilate ΔABC about A with a scale factor of 2. Fill in the blanks below.
   a. A'(   ,   )
   b. B'(   ,   )
   c. C'(   ,   )

4. Using Pythagorean Theorem (if necessary), estimate the following distances. (Round to the nearest hundredth)
   a. AB' =
   b. BB' =
   c. AC' =
   d. CC' =
   e. B'C'=

5. On a new set of coordinates, replot ΔABC.

6. Dilate ΔABC about B with a scale factor of ½. Fill in the blanks below.
   a. A''(   ,   )
   b. B''(   ,   )
   c. C''(   ,   )

7. Using Pythagorean Theorem (if necessary), estimate the following distances. (Round to the nearest hundredth)
   a. BA'' =
   b. AA'' =
   c. BC'' =
   d. CC'' =
   e. A''C''=

(more on the back)

8. On a new set of coordinates, replot ΔABC.

9. Dilate ΔABC about C with a scale factor of 3/2. Fill in the blanks below.
   a. A'''(   ,   )
   b. B'''(   ,   )
   c. C'''(   ,   )

10. Using Pythagorean Theorem (if necessary), estimate the following distances. (Round to the nearest hundredth)
    a. CA''' =
    b. AA''' =
    c. CB''' =
    d. BB''' =
    e. A'''B'''=

11. Prove that each set of triangles has one pair of parallel sides. (How do you prove that lines on a grid are parallel?)

12. What other patterns did you notice about the dilations?

13. On a new set of coordinates, replot ΔABC.


14. On the same set of coordinates plot triangle A(-4, 4), D(-12, -10), E(17, 4).


15. ΔABC ~ ΔADE? Explain your answer.