Homework: Use **Graph paper** to complete the following

For each problem below: **Translations Homework**

a) Use graph paper to graph the pre- image in one color and the image in another color.
b) Write the algebraic (arrow) rule for the given transformation

1. DSTU with S(1, 2), T(4, 3), and U(5, -3); translate left 4 and up 3.

2. Parallelogram ABCD with A(-4, -3), B(-1, 4), C(5, 6) and D(2, -1); translate right 2 and down 4.

3. Rectangle PQRS with P(4, 0), Q(3, -3), R(-3, -1) and S(-2, 2); translate left 2 and up 1.

4. Parallelogram RSTU with R(-4, -2), S(-3, 1), T(3, 4) and U(2, 1); translate right 4 and down 3.

5. DKLM with K(1, -3), L(4, 1), and M(7, 2); translate left 5.

For each problem below: **Reflections Homework**

a) Use graph paper to graph the pre- image in one color and the image in another color.
b) Write the algebraic (arrow) rule for the given transformation

1.   DABC with A(-3, 2), B(-1, 3), and C(1, 0); reflection in the x-axis.

2.   DXYZ with X(2, -1), Y(4, -3), and Z(-2, 1); reflection in the y-axis.

3. DABC with A(3, 4), B(-1, 0), and C(-2, 4); reflection in the line y = x.

4. Parallelogram RSTU with R(-3, 2), S(3, 2), T(5, -1) and U(-1, -1); reflection in the line y = x.

5. Given DMNP with M(2, 3), N(-1, 2), and P(1, -1).
        a) Create DM'N'P' by reflecting DMNP in the y-axis.
        b) Create DM''N''P'' by reflecting DM'N'P' in the line y = x.

For each problem below: **Reflections Homework**

a)   Use graph paper to graph the pre- image in one color and the image in another color.
b)   Write the algebraic (arrow) rule for the given transformation

1.   Triangle RST with R(-2, 0), S(-3, 4), and T(3, 2); rotate 90° counterclockwise.

2.   Parallelogram LMNP with L(3, 4), M(7, 4), N(9, -3) and P(5, -3); rotate 180° clockwise.

3.   Quadrilateral PSTU with P(-3, 5), S(2, 6), T(8, 1) and U(-6, -4); rotate 270° counterclockwise.

4.   Parallelogram EFGH with E(-5, -4), F(-3, -1), G(5, -1) and H(3, -4); rotate 90° clockwise.

For each problem below: **Dilations Homework**

a)   Use graph paper to graph the pre- image in one color and the image in another color.
b)   Write the algebraic (arrow) rule for the given transformation
c)   Actually write out the coordinate points for each! Estimate any decimals on your graph (when graphing)

1.   Triangle STU with S(1, 2), T(4, 3), and U(5, -3); dilate with scale factor r = 2.

2.   Triangle KLM with K(1, -3), L(6, 1), and M(9, 3); dilate with scale factor r = 1/3.

3.   Parallelogram ABCD with A(-4, -3), B(-1, 4), C(5, 6) and D(2, -1); dilate with r = ½.

4.   Rectangle PQRS with P(4, 0), Q(3, -3), R(-3, -1) and S(-2, 2); dilate with scale factor r = 1.6.