Lesson 1 Homework Practice

Congruence and Transformations

Determine if the two figures are congruent by using transformations. Explain your reasoning.

1. The two triangles are congruent because a rotation followed by a translation will map \( \triangle ABC \) onto \( \triangle RST \).

2. The two figures are congruent because a clockwise rotation of 180° followed by a translation will map the \( EFGH \) onto \( IJKL \).

3. The two figures are not congruent because no sequence of transformations will map Figure A onto Figure B exactly.

4. The two figures are congruent because a clockwise rotation of 180° followed by a translation will map the Figure A onto Figure B.

5. GRAPHIC DESIGN The Art Club designed the logo shown. What transformations did they use if the top trapezoid is the preimage and the bottom trapezoid is the image?
   Sample answer: the preimage is reflected over a horizontal line

6. SCRAPBOOKING Charlotte used a stamp to create the pattern shown. What transformations did she use if parallelogram A is the preimage and parallelogram B is the image? Sample answer: the preimage is translated down and to the left