8th Grade Geometry p. 227 Lesson 4.3: 1-24 Answer key

1) translations, reflections, rotations

2) A transformation that maps one figure onto a congruent figure preserves lengths and angle measures, so it is a rigid motion.

3) rotation **4) translation** **5) reflection**

6-8) answers vary; ask Mr. Gerads if you have questions **9) C**

10) No; not all sides are congruent **11) Yes; reflection across the line y = x**

12) Yes; translation 3 units right and 2 units down

13) Yes; rotation 90° counterclockwise about the origin

14) Yes; translation 3 units right and 5 units up **15) No; corresponding side not congruent**

16) A translation 3 units right and 1 unit down is a rigid transformation

17) Multiplying the y-coordinate by 2 stretches the shape so the lines are not congruent

18) No **19) Yes; translation then reflection or rotation then reflection**

20) 90° rotation (either way), then translate right and down

21) 180° around the midpoint of $\overline{BC}$; reflection across $\overline{BC}$ followed by a reflection across the perpendicular bisector of $\overline{BC}$

22) 180° rotation **23) 90° rotation counterclockwise**

24) 120° rotation clockwise, followed by a translation