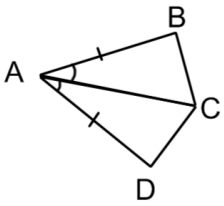
Geometry Midterm Review Name_____ Date_____

1. If a coordinate (a, b) was translated left 2 and up 11, then reflected over y= x, then rotated 90 degrees clockwise, what would the coordinate notation for this sequence of transformations?

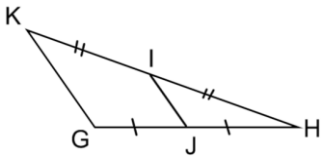
2. Prove the following triangles are congruent?



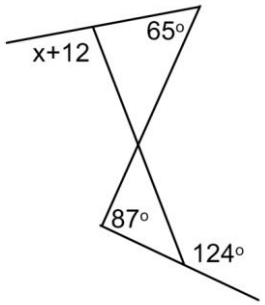
3. What are the steps for bisecting a line segment?

4. What are the steps for inscribing a square in a circle?

5. $\overline{IJ}$ is the midsegment of triangle HKG. Find the value of x, if m$\overline{IJ}$ = 3x-4 and m$\overline{KG}$=4x + 9. $\angle F \cong \angle H$



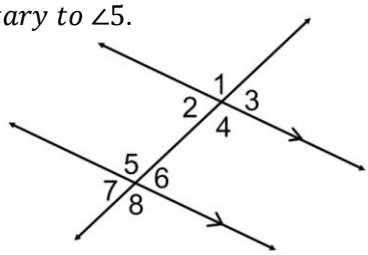
6. Find the value of x, in the following image.



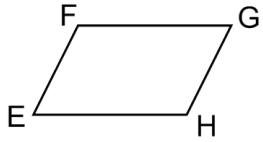
7. Define the following terms: rotation, reflection, and rigid motion.

8. $\Delta ABC \sim \Delta DEF$ If side lengths of ΔABC are 3 in, 4 in and 5 in. Give possible values for side lengths of ΔDEF.

9. Prove that $\angle 2$ *is supplementary to* $\angle 5$.



10. EFGH is a parallelogram, prove $\angle F \cong \angle H$ and $\angle E \cong \angle G$.



11. If $\Delta QRS \cong \Delta TUV$ name three pairs of corresponding congruent parts.

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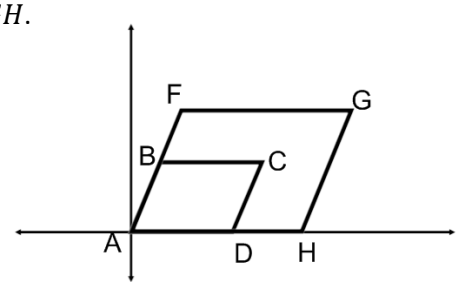
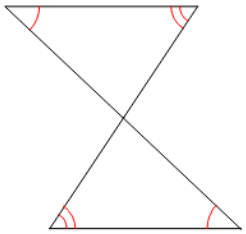
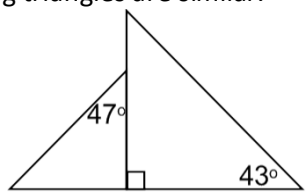
12. If $ABCD \sim AFGH$ and B(1,2), F(1.5,3), and G(9,3) what is the coordinate for point C and what is the scale factor of $ABCD \text{ to } AFGH$.



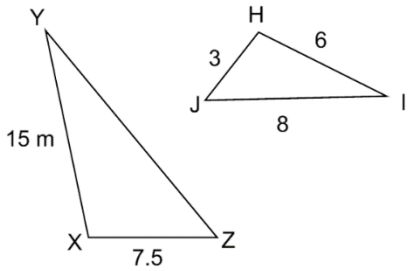
13. Do the following triangles have to be congruent? If so, how do you know?



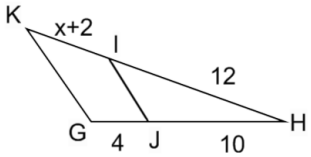
14. Determine if the following triangles are similar. Explain how you know.



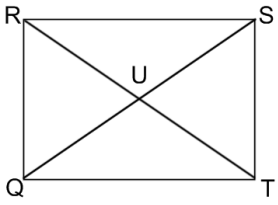
15. $\Delta XYZ \sim \Delta HIJ$ Find the length of $\overline{YZ}$.



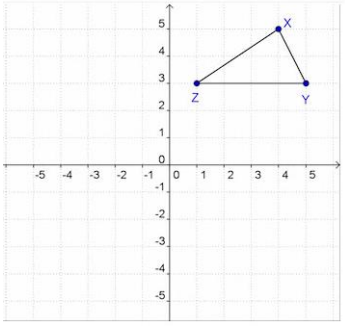
16. Given that $\overline{IJ}$ is parallel to $\overline{KG}$, find the value of x.



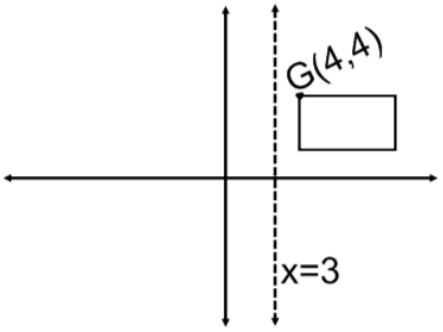
17. QRST is a rectangle. Find the value of x, if $\overline{RU} = 4x - 3$ and $\overline{SQ} = 10x - 9$.



18. If ΔXYZ was rotated 90° CCW, reflected over the line y=x, then rotated 270° CW what quadrant would the final image be in?



19. If the following image was reflected across the line x=3, what would the coordinate for G' be?



20. ΔABC is an isosceles triangle,what is the value of x?