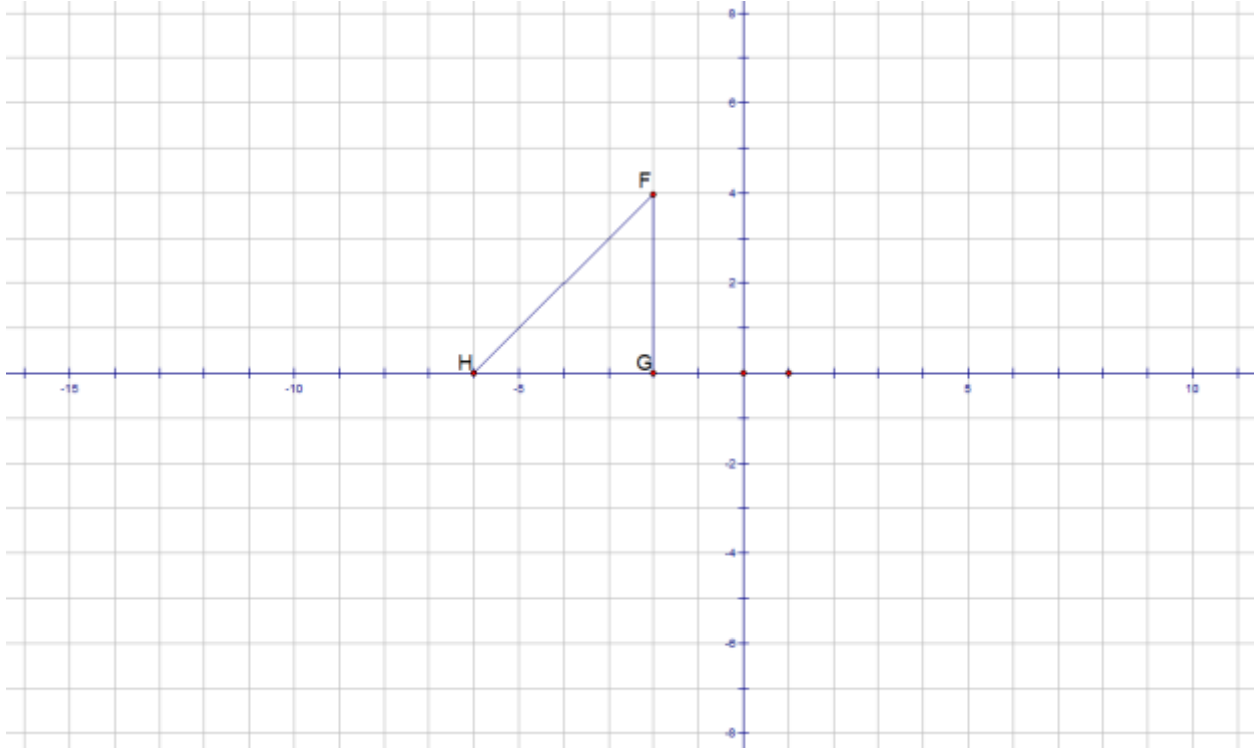


Geometry – Standard G.SRT.2 – Take-Home Practice

Below $\triangle FGH$ is plotted.



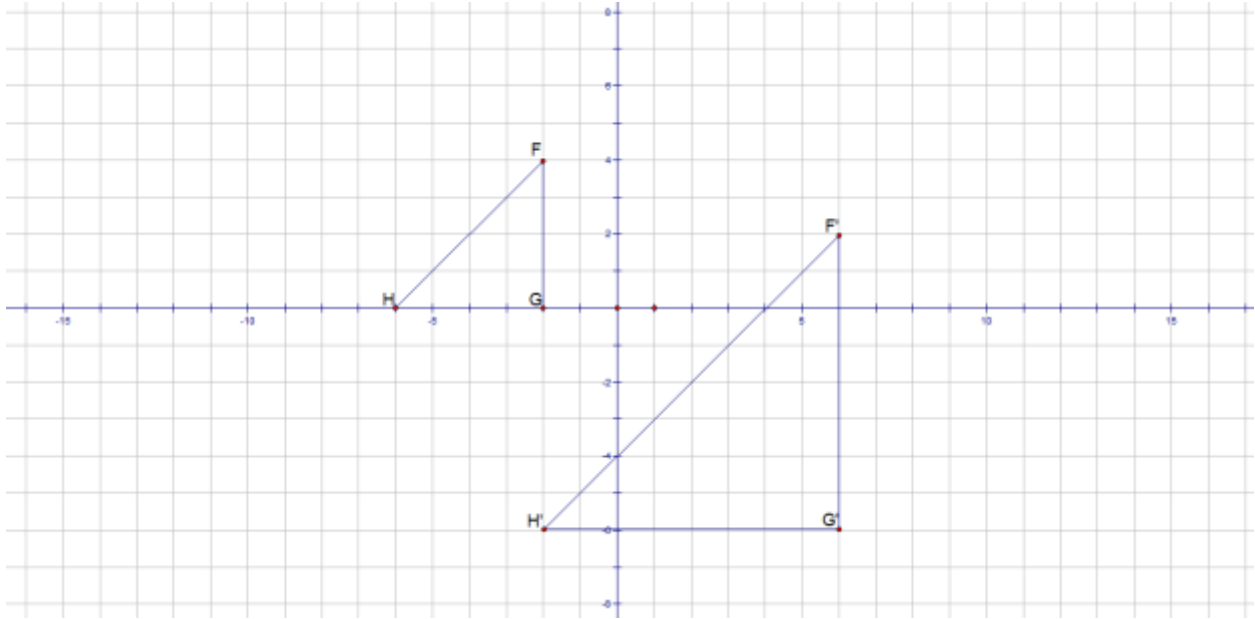
1. What is the length of GH ?
2. What is the length of FG ?
3. What is the length of FH ?
4. What is the measure of angle F ?
5. What is the measure of angle G ?
6. What is the measure of angle H ?

Now dilate $\triangle FGH$ about point $(0, 4)$ using scale factor $\frac{5}{2}$.

7. Label the coordinates $\triangle F'G'H'$: $F'(\quad , \quad)$, $G'(\quad , \quad)$, $H'(\quad , \quad)$
8. What is the length of $G'H'$?
9. What is the length of $F'G'$?
10. What is the length of $F'H'$?
11. What is the measure of angle F' ?
12. What is the measure of angle G' ?
13. What is the measure of angle H' ?

14. Now, prove that $\triangle FGH \sim \triangle F'G'H'$

Geometry – Standard G.SRT.2 – Take-Home Practice



Remember, **the definition of similarity in terms of similarity transformations: If two shapes are similar, then they are the image and pre-image after a dilation.**

Using the side length measurements, prove that the two triangles shown above are similar.

Now that you've done that, find the center of the dilation that connects the two triangles. Prove that you've found the correct point. What is the scale factor of the dilation?