Geometry

Similarity

Students will be required to

- use transformations and congruence and similarity criteria to prove relationships among composite geometric figures.
- use transformations and congruence and similarity criteria to solve multi-step problems.

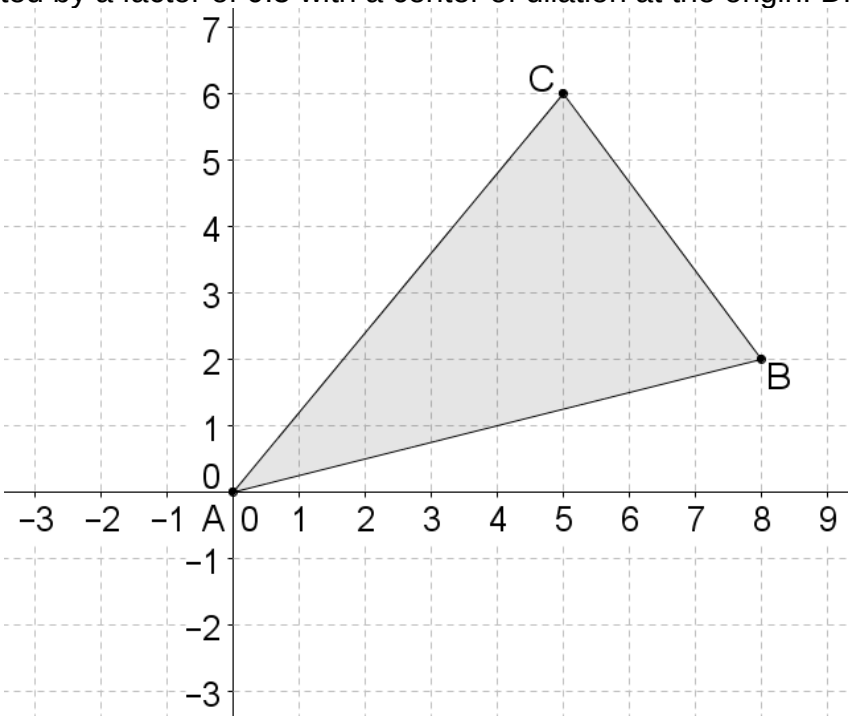
Performance Level Descriptors Covered

- Similarity: G-SRT.1a, G-SRT.1b, G-SRT.2, G-SRT.5

Name_____

G-SRT.1a

1. △*ABC* is dilated by a factor of 0.5 with a center of dilation at the origin. Draw *A'B'C'*



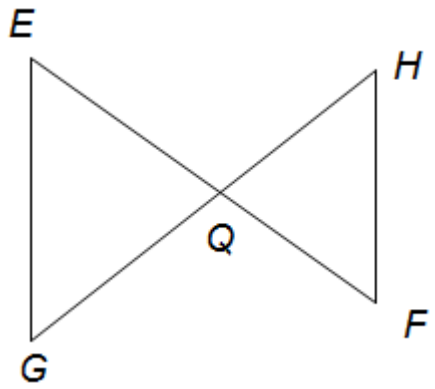
G-SRT.1b

2. Line segment $\overline{EF}$ is dilated to form $\overline{E'F'}$ by various scale factors. Check one box for each row to show if $\overline{E'F'}$ will be longer or shorter than $\overline{EF}$ for each scale factor.

When the scale factor is		longer	shorter	
0.25	then $\overline{EF}$ will be			than $\overline{E'F'}$.
2				
–3				

G-SRT.2

3. In the figure below $\overline{EF}$ intersects $\overline{GH}$ at point *Q* to form the triangles as shown.



Which provide enough information to prove $\triangle EQG$ is similar to $\triangle FQH$?
Select **all** that apply.

- ☐ A. $\angle E \cong \angle F$
- ☐ B. $\overline{EG}$ $\overline{HF}$
- ☐ C. $\overline{EF}$ bisects $\overline{GH}$
- ☐ D. $EQ = FQ$
- ☐ E. $\overline{EF}$ and $\overline{GH}$ bisect each other

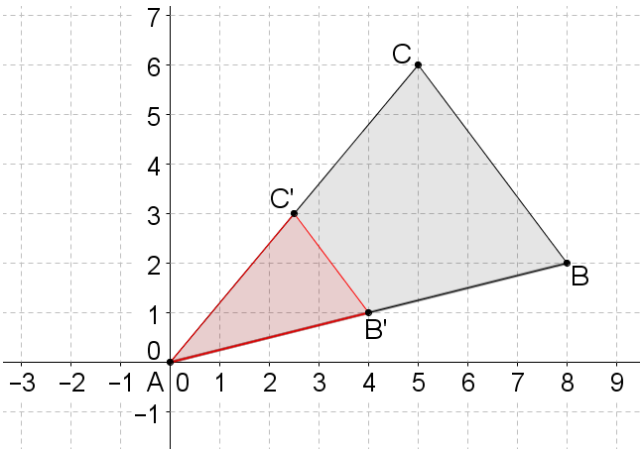
G-SRT.5

4. Right $\triangle XYZ$ has side lengths 6 units, 8 units, and 10 units. It is dilated by a scale factor of 3 to form $\triangle X'Y'Z'$. What is the area of $\triangle X'Y'Z'$?

☐ square units

ANSWER KEY

1.



2.

When the scale factor is		longer	shorter	
0.25	then $\overline{EF}$ will be	X		than $\overline{E'F'}$.
2			X	
–3			X	

3.

[X] A. $\angle E \cong \angle F$

[X] B. $\overline{EG} \parallel \overline{HF}$

[ ] C. $\overline{EF}$ bisects $\overline{GH}$

[ ] D. $EQ = FQ$

[ ] E. $\overline{EF}$ and $\overline{GH}$ bisect each other

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