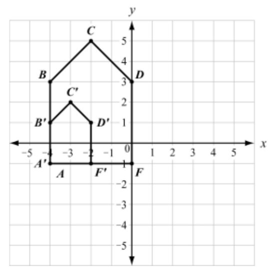
Name: ____ Date: ____________________________

EOC MULTIPLE CHOICE PRACTICE

1. Figure *A'B'C'D'F'* is a dilation of figure *ABCDF* by a scale factor of ½.
   The dilation is centered at (–4, –1).

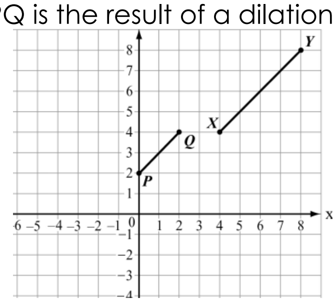


Which statement is true?

a) $\frac{AB}{A'B'} = \frac{B'C'}{BC}$ b) $\frac{AB}{A'B'} = \frac{BC}{B'C'}$ c) $\frac{AB}{A'B'} = \frac{BC}{D'F'}$ d) $\frac{AB}{A'B'} = \frac{DF}{B'C'}$

2. Which transformation results in a figure that is similar to the original figure but has a greater area?
   a) a dilation of ΔQRS by a scale factor of 0.25
   b) a dilation of ΔQRS by a scale factor of 0.5
   c) a dilation of ΔQRS by a scale factor of 1
   d) a dilation of ΔQRS by a scale factor of 2

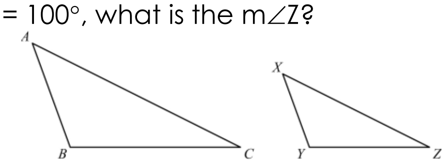
3. In the coordinate plane, segment PQ is the result of a dilation of segment XY by a scale factor of 1/2.



Which point is the center of dilation?

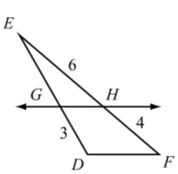
a) (-4, 0) b) (0,-4) c) (0, 4) d) (4, 0)

4. In the triangles shown, ΔABC is dilated by a factor of 2/3 to form ΔXYZ.
   Given that m∠A = 50° and m∠B = 100°, what is the m∠Z?



a) 15° b) 25° c) 30° d) 50°

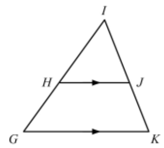
5. In the triangle shown, $\overline{GH} \parallel \overline{DF}$.



What is the length of $\overline{EG}$?

a) 2.0 b) 4.5 c) 7.5 d) 8.0

6. Use this triangle to answer the question.



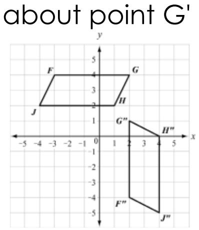
This is a proof of the statement "If a line is parallel to one side of a triangle and intersects the other two sides at distinct points, then it separates these sides into segments of proportional lengths."

Which reason justifies step 2?

a) Alternate interior angles are congruent.
b) Alternate exterior angles are congruent.
c) Corresponding angles are congruent.
d) Vertical angles are congruent.

	Step	Justification
1	$\overline{GK}$ is parallel to $\overline{HJ}$	Given
2	$\angle HGK \cong \angle IHJ$ $\angle IKG \cong \angle IJH$	?
3	$\triangle GIK \sim \triangle HIJ$	AA similarity postulate

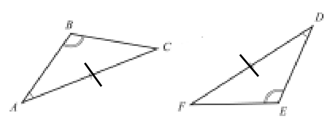
7. Parallelogram FGHJ was translated 3 units down to form parallelogram F 'G'H'J '. Parallelogram F 'G'H'J ' was then rotated 90° counterclockwise about point G' to obtain parallelogram F "G"H"J ".



Which statement is true about parallelogram FGHJ and parallelogram F "G"H"J "?

a) The figures are both similar and congruent.
b) The figures are neither similar nor congruent.
c) The figures are similar but not congruent.
d) The figures are congruent but not similar.

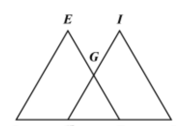
8. Consider the triangles shown.



Which can be used to prove the triangles congruent?

a) SSS b) ASA c) SAS d) AAS

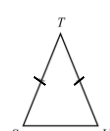
9. In this diagram, $\overline{DE} \cong \overline{JI}$ and $\angle$D $\cong$ $\angle$J.



Which additional information is sufficient to prove that ΔDEF is congruent to ΔJIH?

a) $\overline{EF} \cong \overline{IH}$ b) $\overline{DH} \cong \overline{JF}$ c) $\overline{HG} \cong \overline{GI}$ d) $\overline{HF} \cong \overline{JF}$

10. In this diagram, STU is an isosceles triangle where $\overline{ST}$ is congruent to $\overline{UT}$. The paragraph proof shows that $\angle$S is congruent to $\angle$U.



It is given that $\overline{ST}$ is congruent to $\overline{UT}$. Draw $\overline{TV}$ that bisects $\angle$T. By the definition of an angle bisector, $\angle$STV is congruent to $\angle$UTV. By the Reflexive Property, $\overline{TV}$ is congruent to $\overline{TV}$. ΔSTV is congruent to ΔUTV by SAS. $\angle$S is congruent to $\angle$U by ____?______.

a) CPCTC b) Reflexive Property of $\cong$ c) Def. of Right angles d) $\angle$ Congruence Postulate