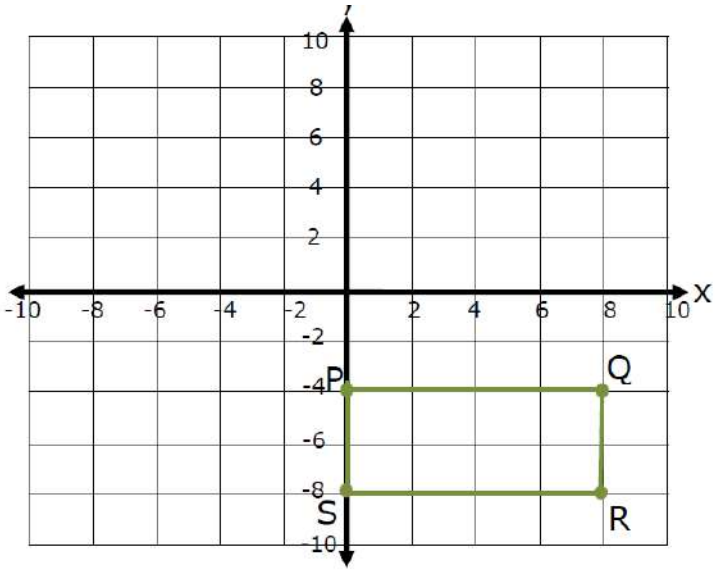
Name:_____ **Date:**_____

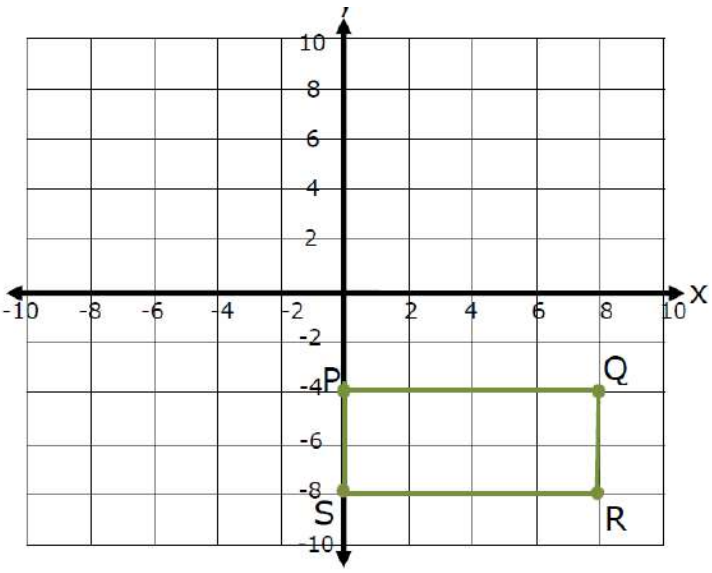
GCC Geometry Unit #5 Day 8 Similarity and Dilations

1)

a) **Graph the image of quadrilateral PQRS after $D_{Origin, ½}$**

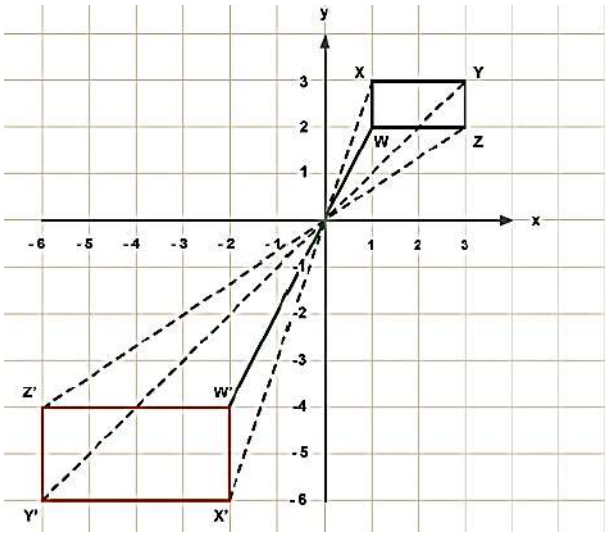
b) **Graph the image of quadrilateral PQRS after $D_{(-6, 4), ½}$**





2) a) **What is the scale factor of this dilation?** _____

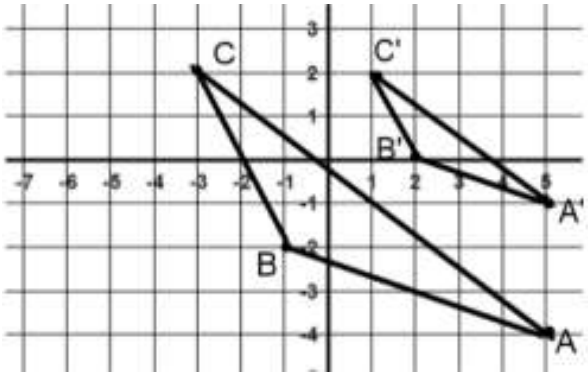
b) **Rewrite with a positive scale factor as a composition of transformations.**



3) Triangle A'B'C' is the image of triangle ABC after a dilation. Use a straight edge to find the center of dilation and the scale factor of the dilation.

Center of dilation _____

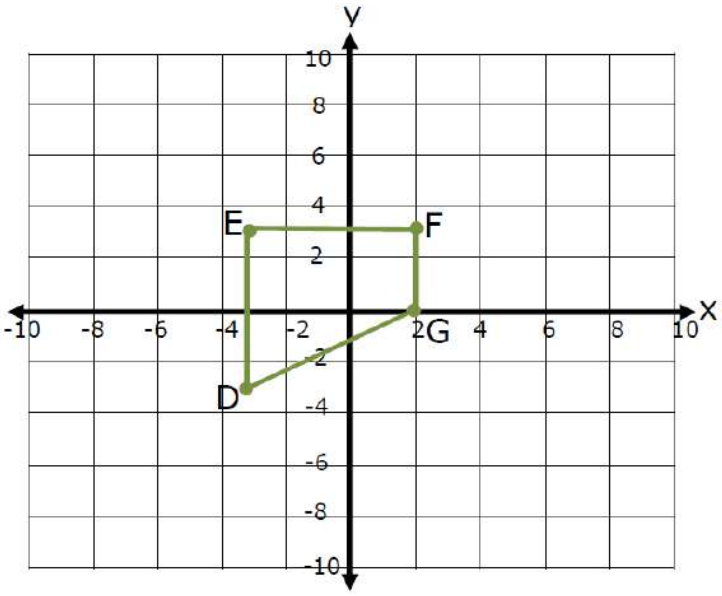
Scale Factor _____

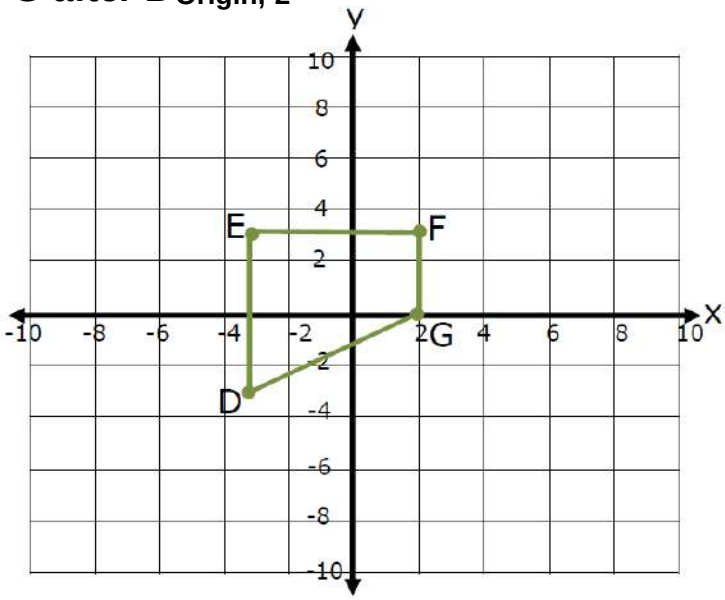


4) **D(-3, -3) E(-3, 3) F(2,3) G(2,0)**

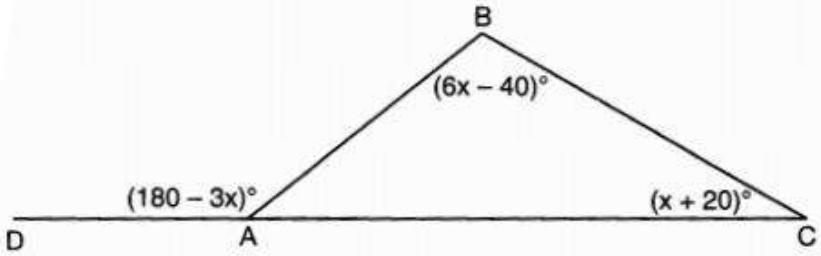
a) Graph the image of quadrilateral DEFG after $D_{Origin,3}$

b) Graph the image of quadrilateral DEFG after $D_{Origin,-2}$





5) In $\triangle ABC$ shown below, side $\overline{AC}$ is extended to point D with $m\angle DAB = (180 - 3x)°$, $m\angle B = (6x - 40)°$, and $m\angle C = (x + 20)°$.



What is $m\angle BAC$?

(1) 20°
(2) 40°
(3) 60°
(4) 80°

6) Which transformation would *not* carry a square onto itself?

(1) a reflection over one of its diagonals
(2) a 90° rotation clockwise about its center
(3) a 180° rotation about one of its vertices
(4) a reflection over the perpendicular bisector of one side