

Dilations show us enlargements or reductions. Follow the directions given below:

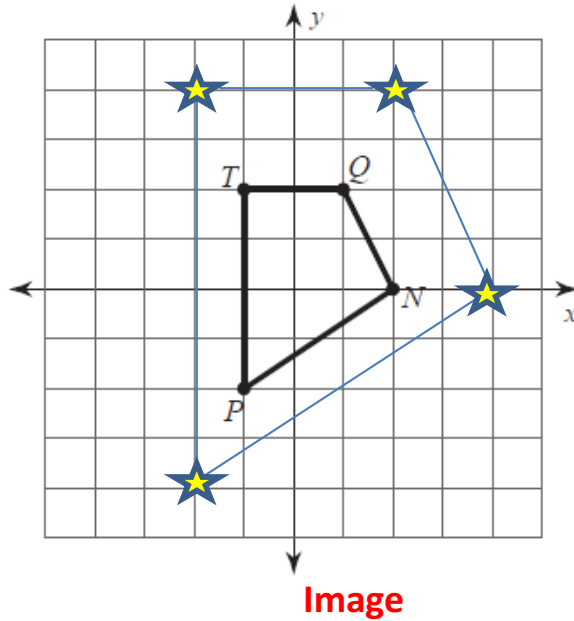
1. Find your original coordinates for the pre-image (the original figure).
2. Multiply the factor of dilation by the original coordinates, then plot the points AND graph the new figure.

EXAMPLE:

DILATION OF 2

center: Origin (0,0)

1. Find the coordinates of the original figure.
2. Multiply by the factor of dilation by the original figure's coordinates (in this case – multiply by 2).
3. Write your new ordered pairs (New Figure).
4. Plot the points and connect each point to create your new figure.



Pre-Image

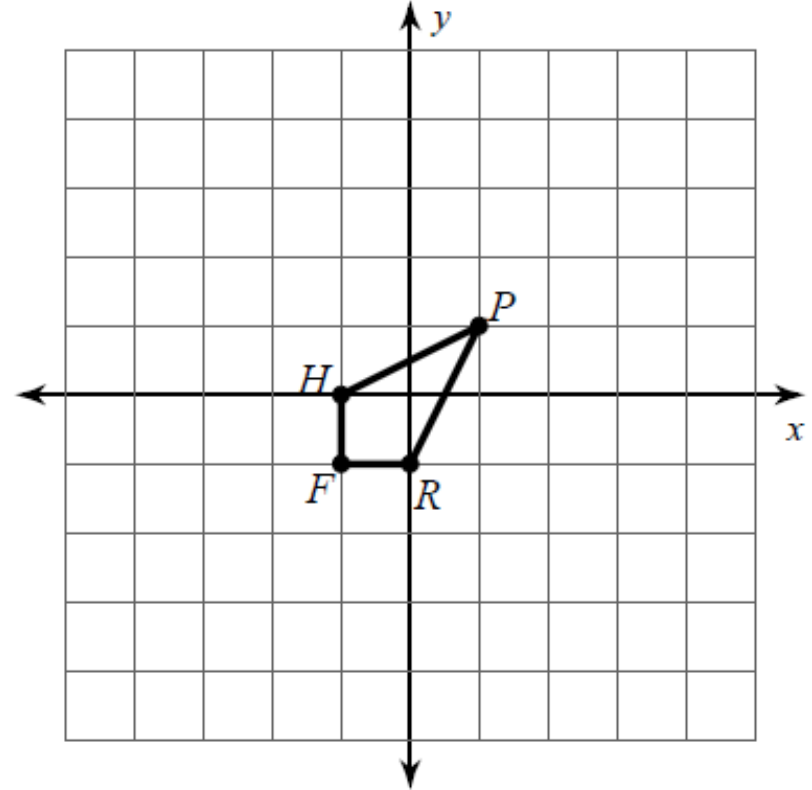
Image

T (-1 , 2)
 Q (1 , 2)
 N (2 , 0)
 P (-1 , -2)



T' (-2 , 4)
 Q' (2 , 4)
 N' (4 , 0)
 P' (-2 , -4)

INTERPRETING YOUR GRAPH: Because the dilation is greater than 1, your new image will be larger than the original, in this case twice the size of the original.



DILATION OF 5 using Origin (0,0) as center.

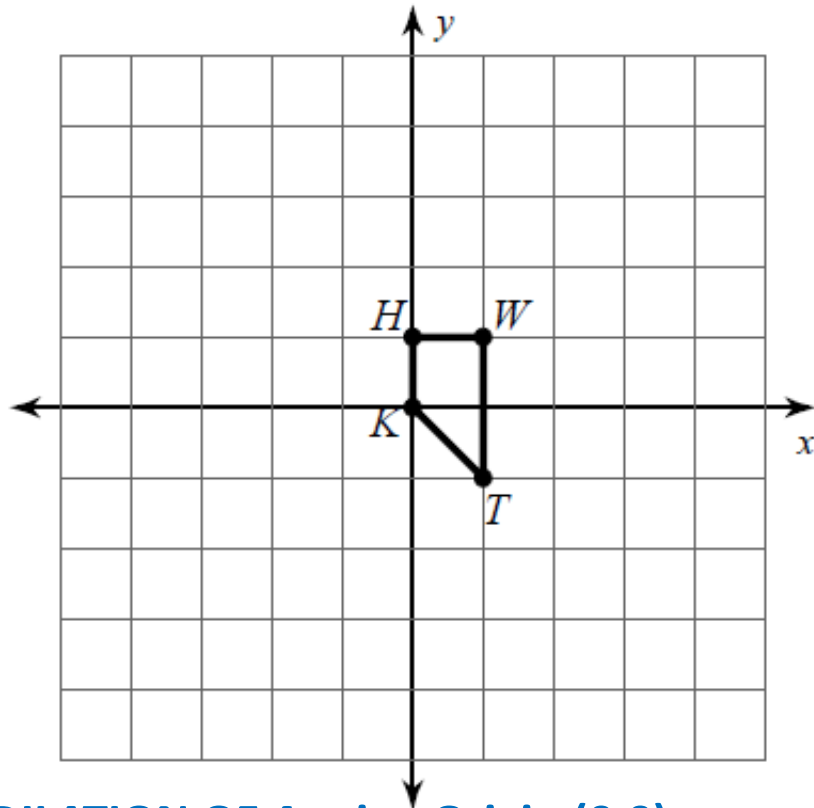
Pre-Image

Image

P (,)
 R (,)
 F (,)
 H (,)




P' (,)
 R' (,)
 F' (,)
 H' (,)

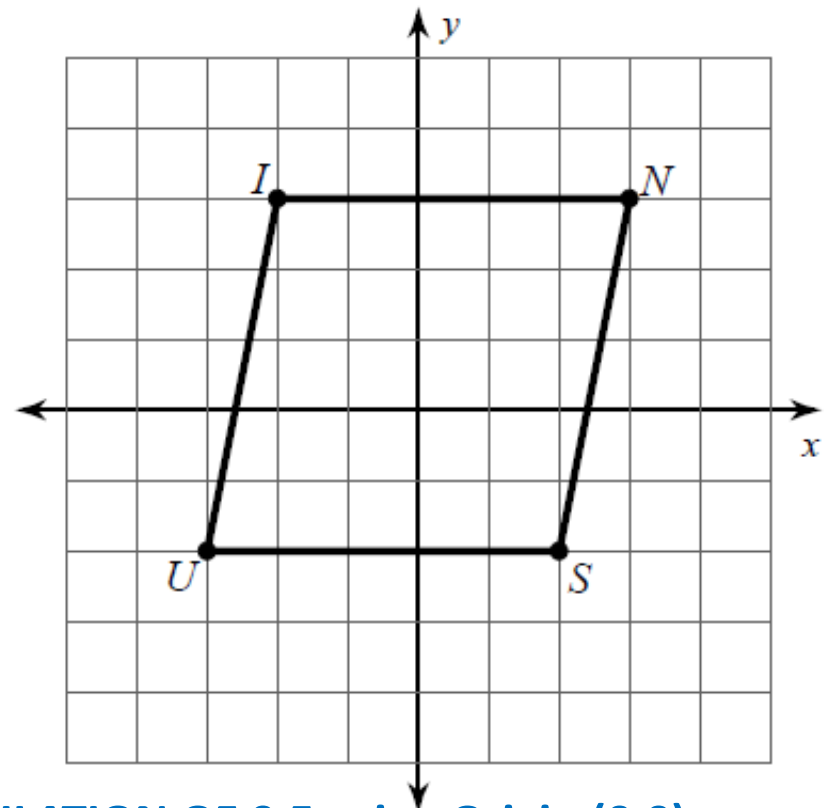


DILATION OF 4 using Origin (0,0) as center.

Original Figure

New Figure


H (-1 , 1)		H' (,)
K (-1 , 0)		K' (,)
W (1 , 1)		W' (,)
T (1 , -1)		T' (,)



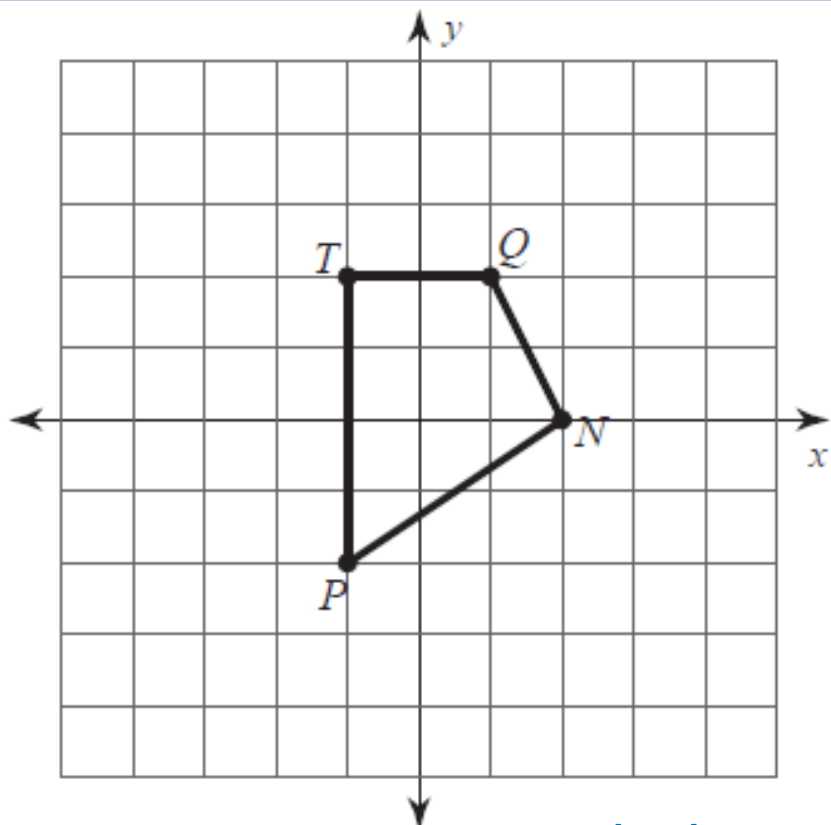
DILATION OF 0.5 using Origin (0,0) as center.

Original Figure

New Figure

I (-2 , 2)		I' (,)
N (2 , 2)		N' (,)
S (2 , -2)		S' (,)
U (-2 , -2)		U' (,)

Directions: You must complete both sets of Coordinates. Sketch new figure labeling new points on graph above.



DILATION OF 2.5 using Origin (0,0) as center.

Original Figure

New Figure

T (,)

T' (,)

Q (,)

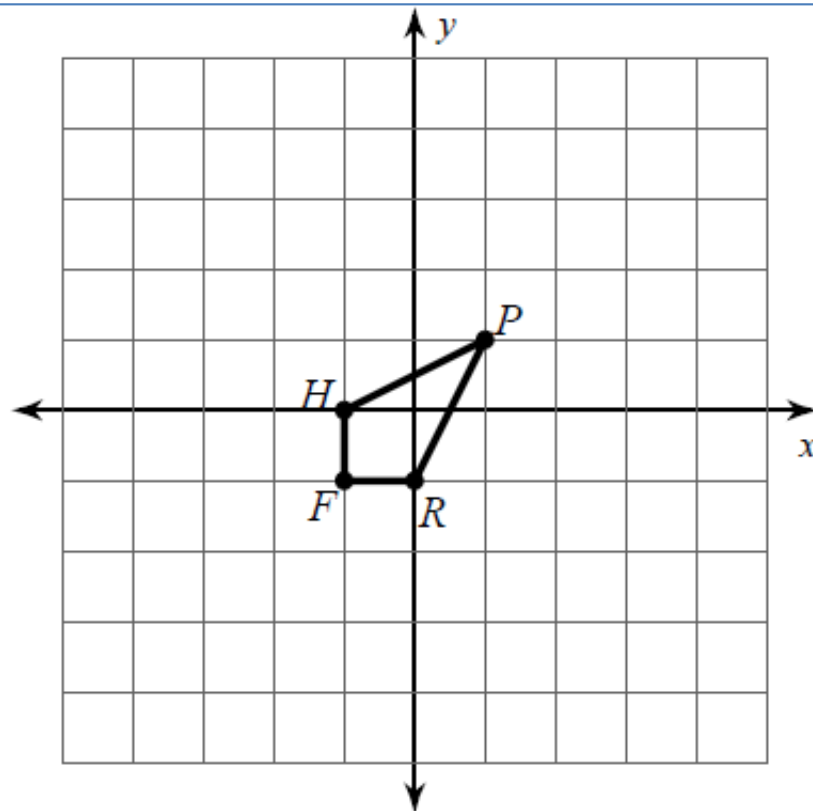
Q' (,)

N (,)

N' (,)

P (,)

P' (,)



DILATION OF 3 using Origin (0,0) as center.

Original Figure

New Figure

P (,)

P' (,)

R (,)

R' (,)

F (,)

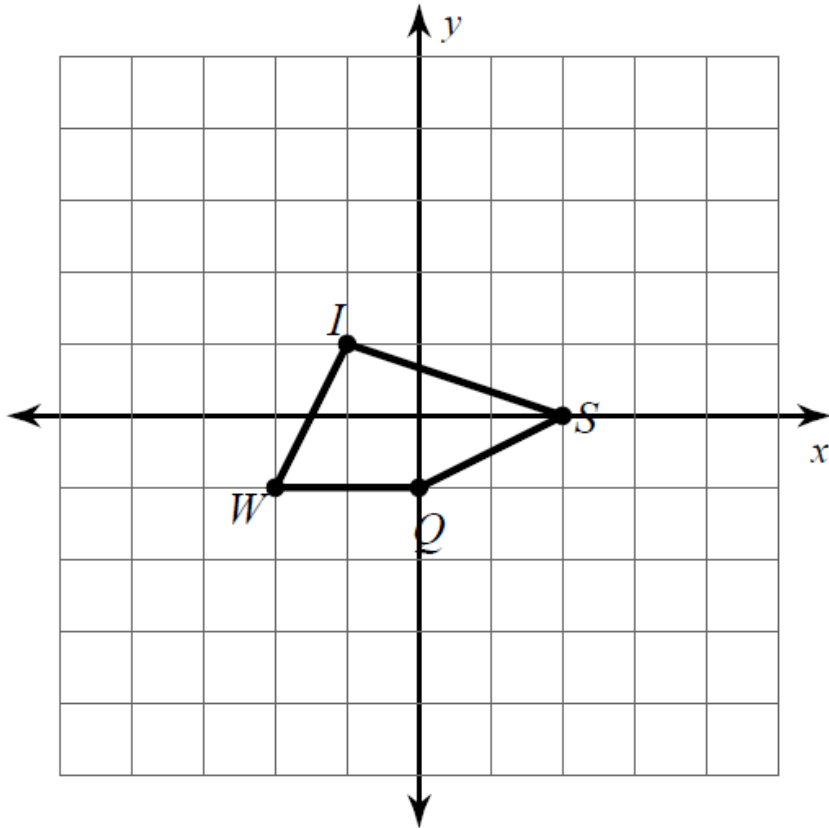
F' (,)

H (,)

H' (,)



Directions: You must complete both sets of Coordinates. Sketch new figure labeling new points on graph above.

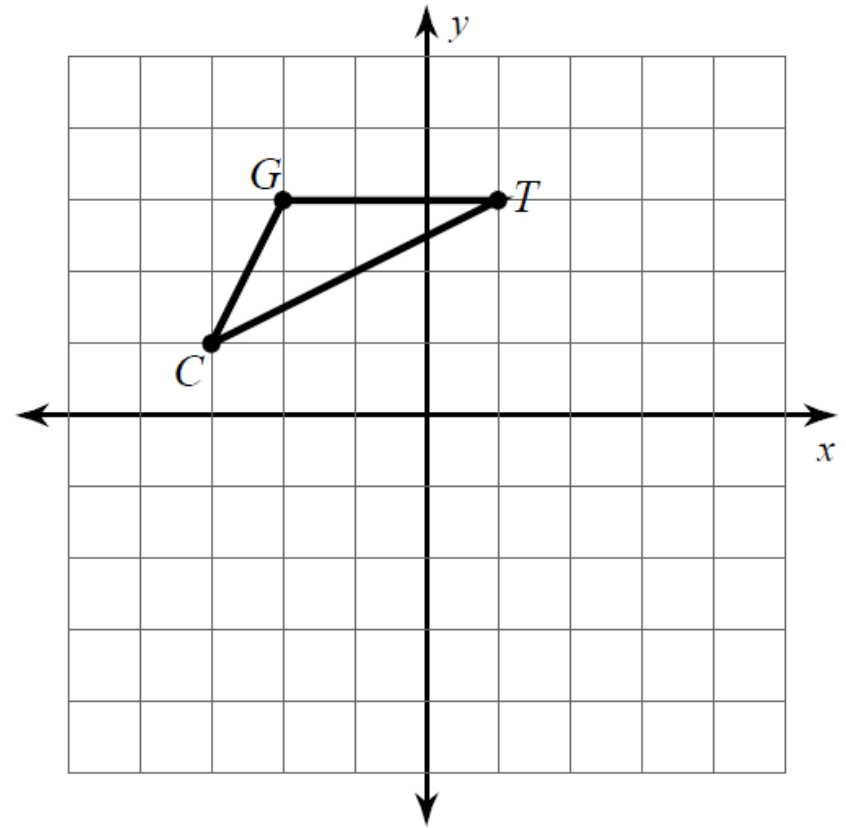


DILATION OF 2.5 using Origin (0,0) as center.

Original Figure

New Figure

I (,)	→	I' (,)
S (,)	→	S' (,)
Q (,)	→	Q' (,)
W (,)	→	W' (,)



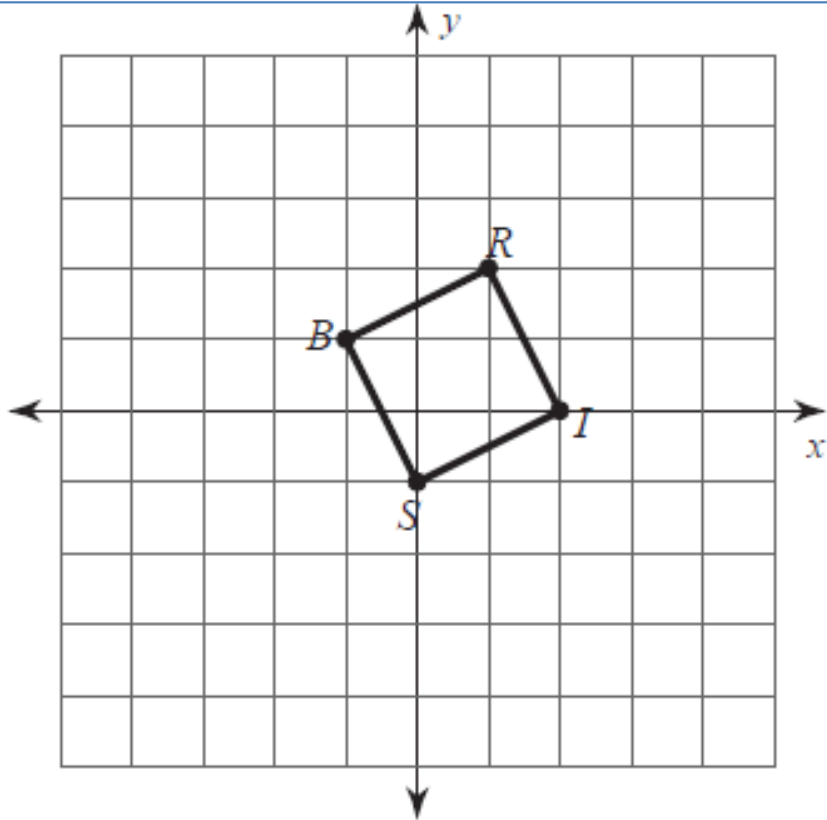
DILATION OF 1.5 using Origin (0,0) as center.

Original Figure

New Figure

G (,)	→	G' (,)
T (,)	→	T' (,)
C (,)	→	C' (,)

Directions: You must complete both sets of Coordinates. Sketch new figure labeling new points on graph above.



DILATION OF 2 using Origin (0,0) as center.

Original Figure

New Figure

R (,)

R' (,)

I (,)

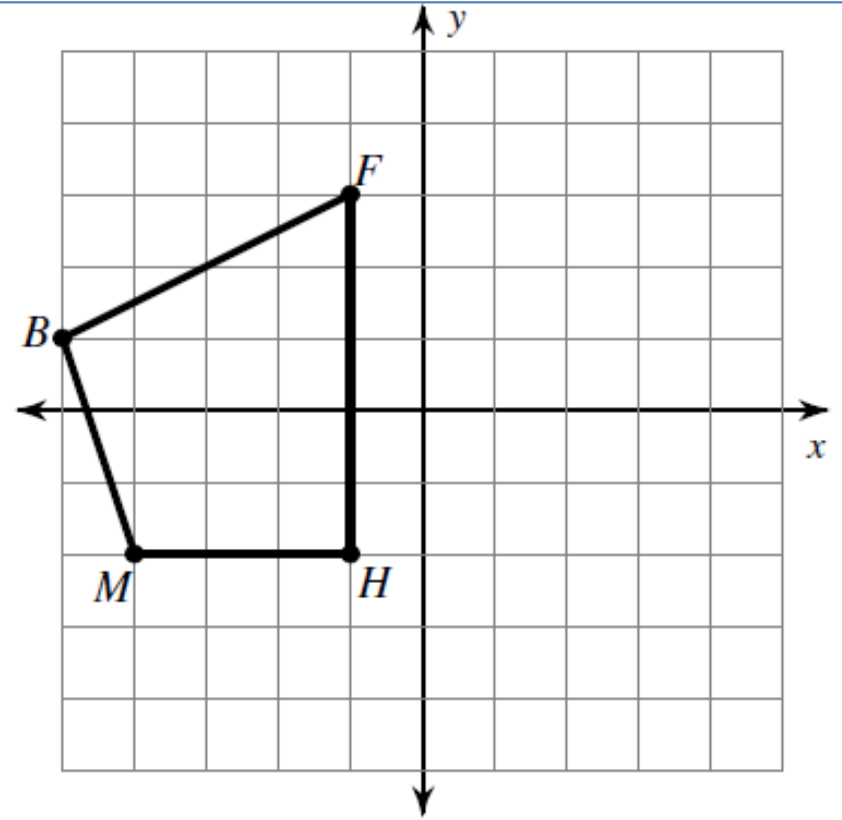
I' (,)

S (,)

S' (,)

B (,)

B' (,)



DILATION OF 0.5 using Origin (0,0) as center.

Original Figure

New Figure

F (,)

F' (,)

H (,)

H' (,)

M (,)

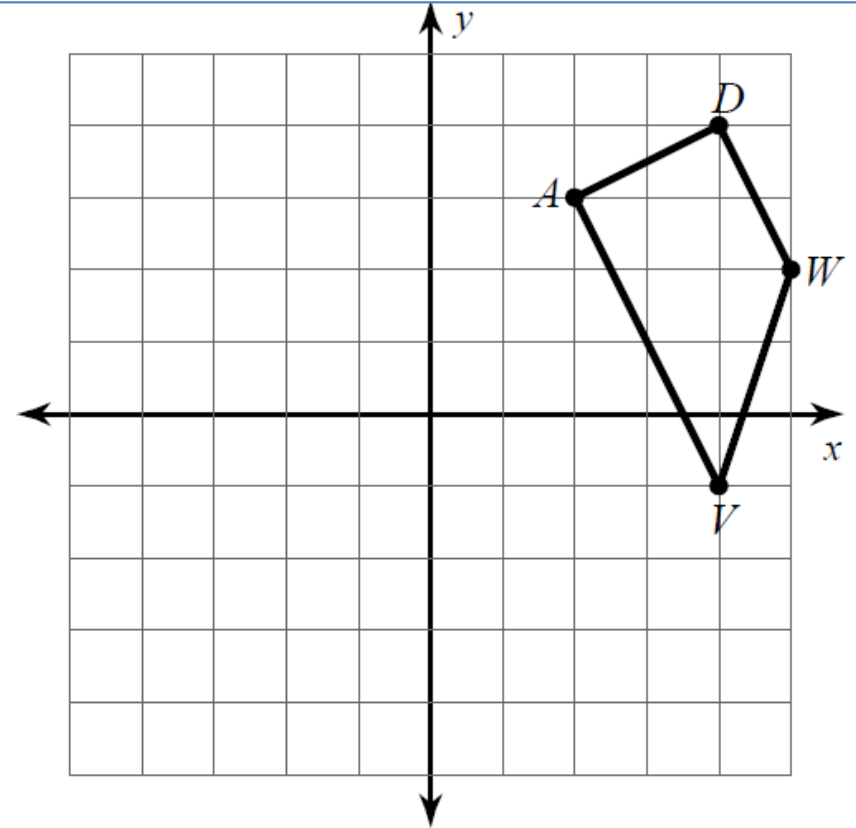
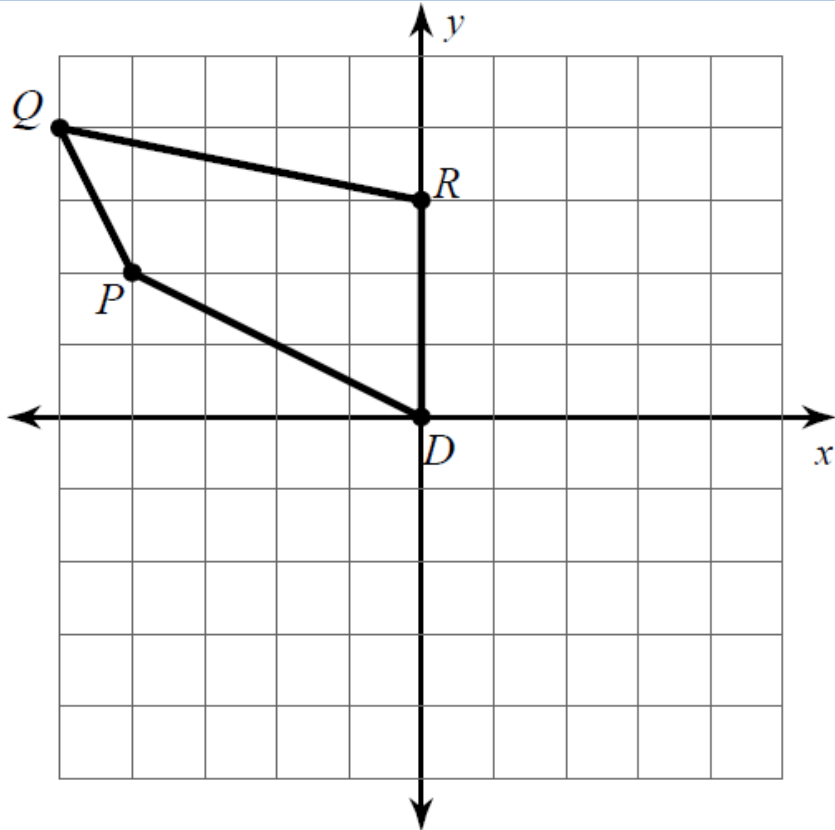
M' (,)

B (,)

B' (,)



Directions: You must complete both sets of Coordinates. Sketch new figure labeling new points on graph above.



DILATION OF $\frac{1}{2}$ using Origin (0,0) as center.

Original Figure

New Figure

Q (,)

Q' (,)

R (,)

R' (,)

D (,)

D' (,)

P (,)

P' (,)



DILATION OF 0.5 using Origin (0,0) as center.

Original Figure

New Figure

A (,)

A' (,)

D (,)

D' (,)

W (,)

W' (,)

V (,)

V' (,)



Directions: You must complete both sets of Coordinates. Sketch new figure labeling new points on graph above.