

Unit 1 Test Reflection

1. **What grade did you think you were going to make on the test?**

- a) A (90-100)
- b) B (80-89.9)
- c) C (73-79.9)
- d) D (70-72.9)
- e) F (below 70)

2. **Why do you think your test grade differed?**

- a) My grade did not differ, and I'm awesome.
- b) The test was not what I expected.
- c) I made simple mistakes, which can be easily fixed.
- d) I did not practice enough on my own.
- e) I just had a bad day.

3. **How much of the review did you complete ON YOUR OWN?**

- a) All of it
- b) 3 out of 4 pages
- c) 2 out of 4 pages
- d) 1 page
- e) a couple of problems

4. **How often did you check the blog?**

- a) Everyday
- b) Twice a week
- c) Once a week
- d) Nights before a quiz or test
- e) Never

5. **What will you do differently for the next unit test?**

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Name		
Date		Period

A	B	C	D	E	A	B	C	D	E		
1	○	○	○	○	○	11	○	○	○	○	○
2	○	○	○	○	○	12	○	○	○	○	○
3	○	○	○	○	○	13	○	○	○	○	○
4	○	○	○	○	○	14	○	○	○	○	○
5	○	○	○	○	○	15	○	○	○	○	○
6	○	○	○	○	○	16	○	○	○	○	○
7	○	○	○	○	○	17	○	○	○	○	○
8	○	○	○	○	○	18	○	○	○	○	○
9	○	○	○	○	○	19	○	○	○	○	○
10	○	○	○	○	○	20	○	○	○	○	○

Test Version: A ○ B ○ C ○ D ○

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# DILATIONS

ENLARGEMENTS = BIGGER

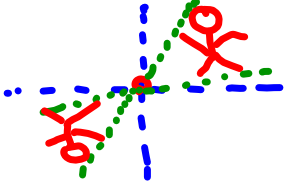
reductions = smaller

**Scorecard: Pages 1-4**

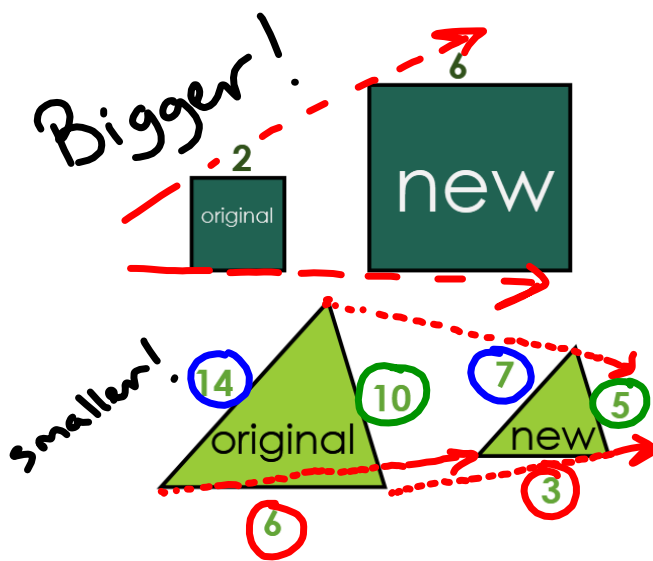
Scale Factor – the  
ratio of a new image  
to its original image

Find by using the ratio of  
corresponding sides

# Scale Factor

- WHEN SCALE FACTOR IS greater than 1, THE SHAPE GETS *BIGGER* (enlargement).   $k > 1$
- WHEN SCALE FACTOR IS less than 1, BUT greater THAN 0, THE SHAPE GETS *SMALLER* (reduction).  $0 < k < 1$

### SCALE FACTOR.



$$\frac{\text{image}^{\text{new}}}{\text{pre-image}^{\text{original}}} = \frac{6}{2} = \frac{3}{1} = 3$$

3:1

$$\frac{3}{6} = \frac{5}{10} = \frac{7}{14} = \frac{1}{2}$$

1:2

Find the coordinates of the dilation image for the given scale factor,  $k$ .

$$(x, y) \rightarrow (kx, ky)$$

Example 1:

$G(0, -2)$ ,  $H(1, 3)$ , and  $I(4, 1)$ ;  $k = 2$

All you do is multiply  $k$  to  $(x, y)$ .

$$G'(0, -4) \quad H'(2, 6) \quad I'(8, 2)$$

Find the coordinates of the dilation image for the given scale factor,  $k$ .

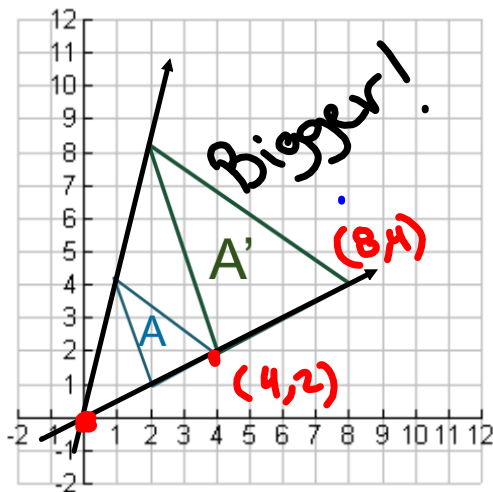
Example 2:

$L(8, -8)$ ,  $N(0, 16)$ , and  $M(4, 5)$ ;  $k = 1/4$

All you do is multiply  $k$  to  $(x, y)$ .  
= "Divide by 4"

$L'(2, -2)$   $N'(0, 4)$   $M'(1, 5/4)$

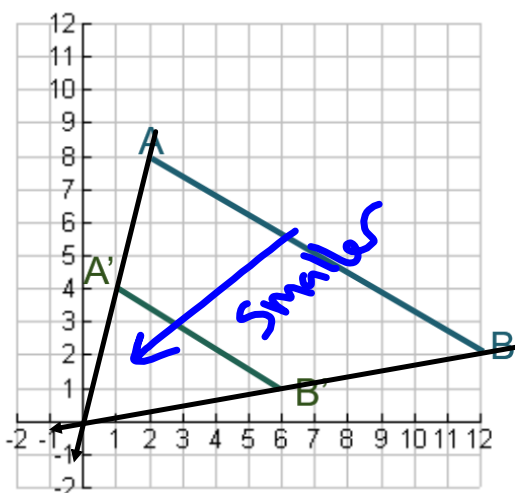
Identify the scale factor of the following dilation.



$$\frac{\text{image}}{\text{pre-image}} = \frac{4}{2} = \frac{2}{1} = 2$$



**Identify the scale factor of the following dilation.**



$$A(2, 8) \quad B(12, 2) \\ A'(1, 4) \quad B'(6, 1)$$

$$\frac{\text{image}'}{\text{preimage}} = \frac{4}{8} = \frac{1}{2}$$

*k* is less than 1,  
reduction!

Graph the given  
dilation.

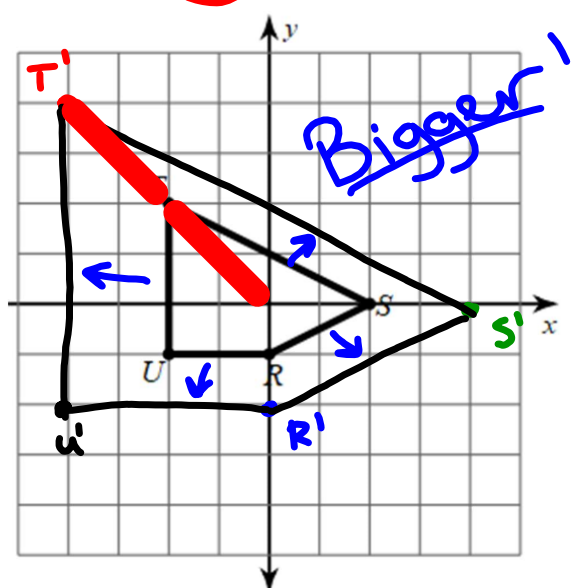
$$T(-2,2) \rightarrow T'(-4,4)$$

$$S(2,0) \rightarrow S'(4,0)$$

$$R(0,-1) \rightarrow R'(0,-2)$$

$$U(-2,-1) \rightarrow U'(-4,-2)$$

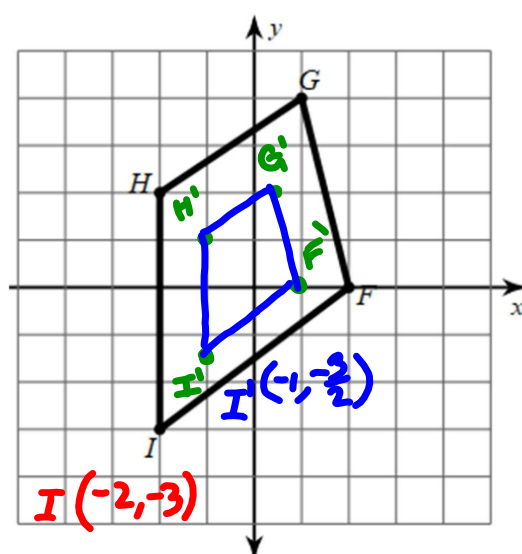
dilation of 2 about the origin



Graph the given dilation.

$$I(-2, -3)$$
$$\left( \frac{1}{2}(-2), \frac{1}{2}(-3) \right)$$
$$I'(-1, -\frac{3}{2})$$

dilation of  $\frac{1}{2}$  about the origin



Geometry

Name \_\_\_\_\_ ID: 1

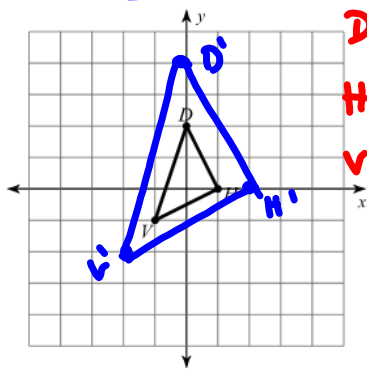
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Dilations

Date \_\_\_\_\_ Period \_\_\_\_\_

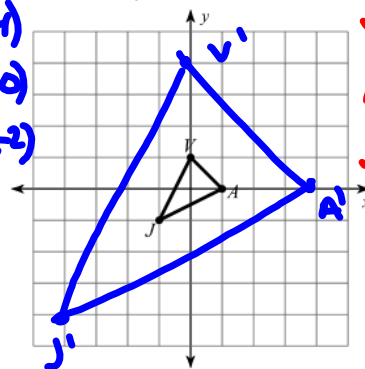
Graph the image of the figure using the transformation given.

1) dilation of 2



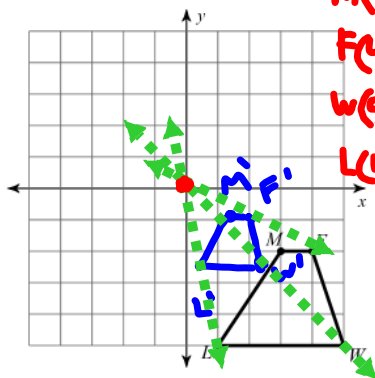
$D(0,2) \rightarrow D'(0,4)$   
 $H(1,0) \rightarrow H'(2,0)$   
 $J(-1,-1) \rightarrow J'(-2,-2)$

2) dilation of 4



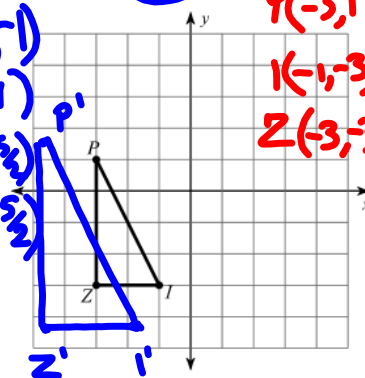
$V(0,1) \rightarrow V'(0,4)$   
 $A(1,0) \rightarrow A'(4,0)$   
 $J(-1,-1) \rightarrow J'(-4,-4)$

3) dilation of  $\frac{1}{2}$



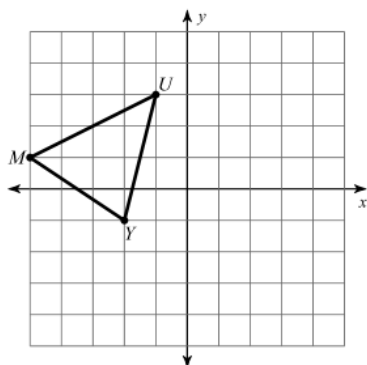
$M(3,-2) \rightarrow M'(1.5, -1)$   
 $F(4,-2) \rightarrow F'(2, -1)$   
 $L(1,-5) \rightarrow L'(0.5, -2.5)$

4) dilation of 1.5

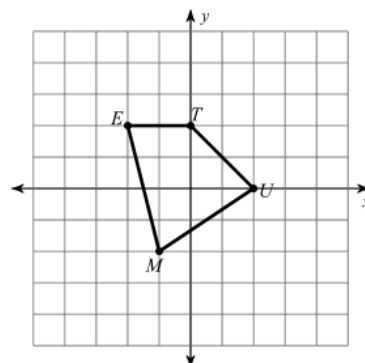


$P(-3,1) \rightarrow P'(-4.5, 1.5)$   
 $I(-1,3) \rightarrow I'(-1.5, -4.5)$   
 $Z(-3,3) \rightarrow Z'(-4.5, -4.5)$

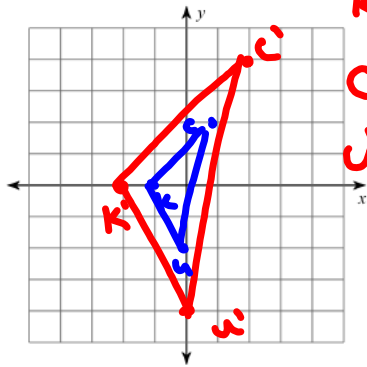
5) dilation of  $\frac{1}{2}$



6) dilation of 2

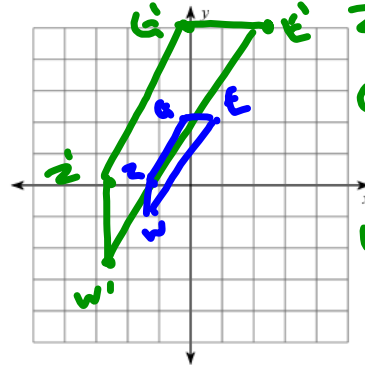


7) dilation of 2  
 $K(-1, 0), C(1, 2), U(0, -2)$



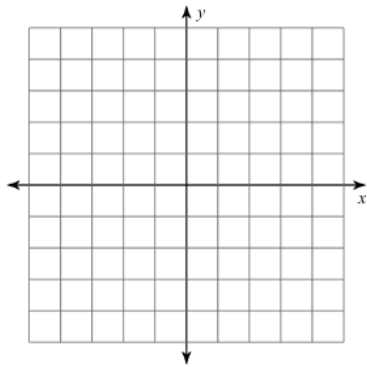
$K'(-2, 0)$   
 $C'(2, 4)$   
 $U'(0, -4)$

8) dilation of 2.5  
 $Z(-1, 0), G(0, 2), E(1, 2), W(-1, -1)$

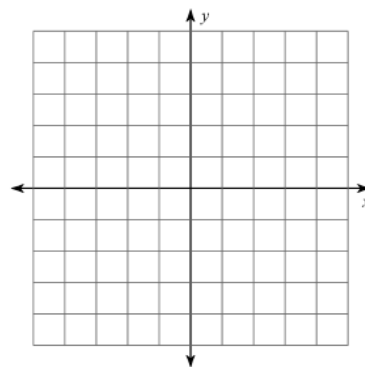


$Z'(-2.5, 0)$   
 $G'(0, 5)$   
 $E'(2.5, 5)$   
 $W'(-2.5, -2.5)$

9) dilation of 1.5  
 $L(-1, -1), K(-2, 1), Q(3, 1)$



10) dilation of  $\frac{1}{4}$   
 $V(-4, 2), M(-4, 4), S(0, 4)$



Write a rule to describe each transformation.

11)

$R(2, 2)$   
 $R'(4, 4)$

$\frac{\text{image}}{\text{pre}} = \frac{4}{2} = 2$

$\therefore$  Dilation of 2  
 $(x, y) \rightarrow (2x, 2y)$

$k=2$

12)

$K(-4, -1)$   
 $K'(-1, -2.5)$

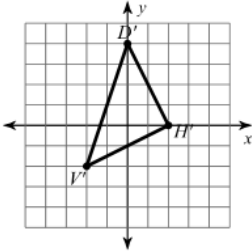
$\frac{\text{image}}{\text{pre}} = \frac{1}{4} = .25$

$\therefore$  Dilation of .25  
 $(x, y) \rightarrow (.25x, .25y)$

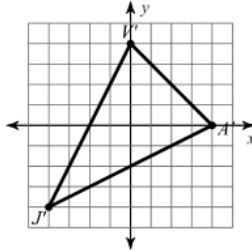
$k=.25$

Answers to Dilations (ID: 1)

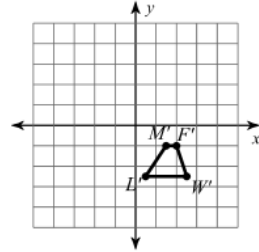
1)



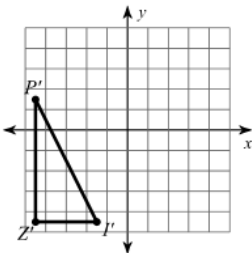
2)



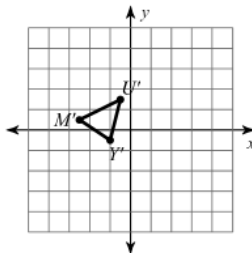
3)



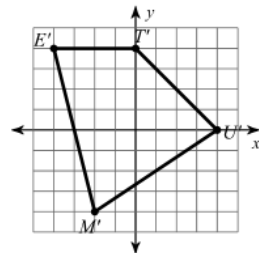
4)



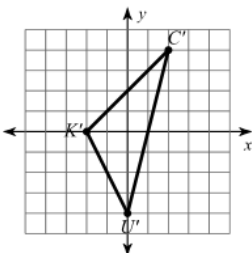
5)



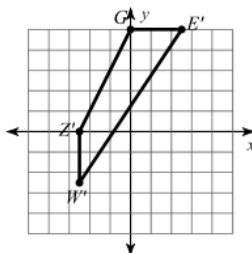
6)



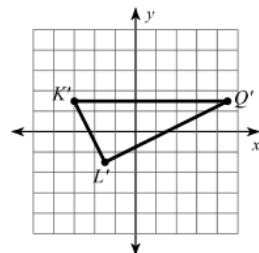
7)



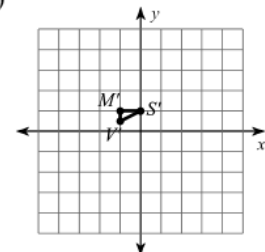
8)



9)



10)



11) dilation of 2

12) dilation of 0.25

Geometry

Name \_\_\_\_\_ ID: 2

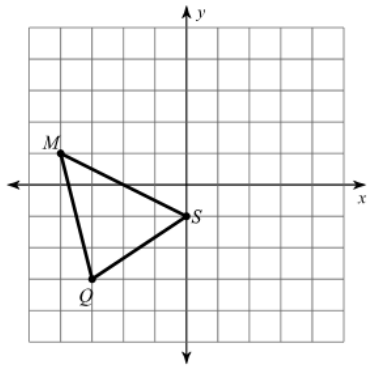
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Dilations

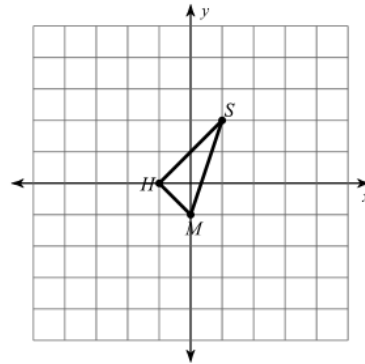
Date \_\_\_\_\_ Period \_\_\_\_

Graph the image of the figure using the transformation given.

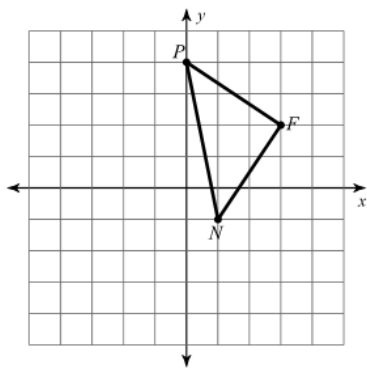
1) dilation of 0.25



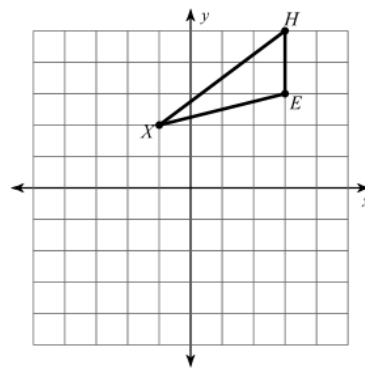
2) dilation of  $\frac{5}{2}$



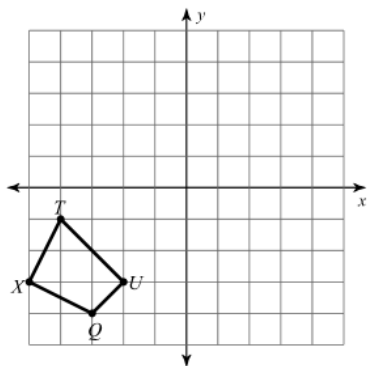
3) dilation of 0.5



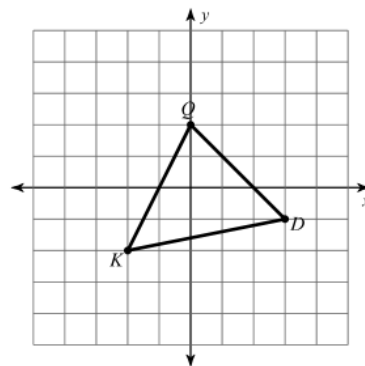
4) dilation of 0.25



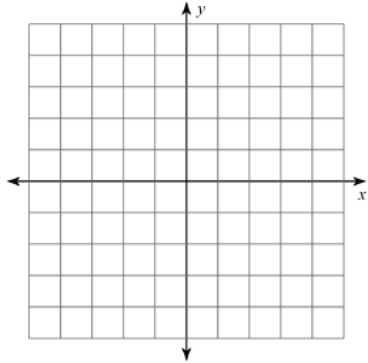
5) dilation of 0.5



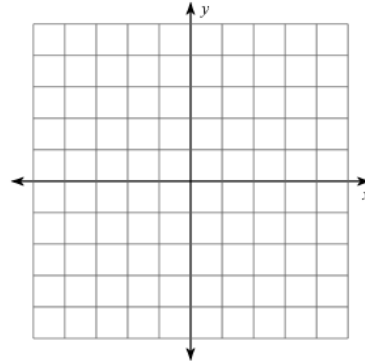
6) dilation of 1.5



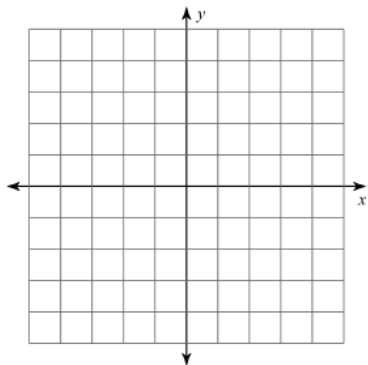
- 7) dilation of 0.5  
 $Y(0, -3), Z(1, -1), D(4, -1), L(1, -4)$



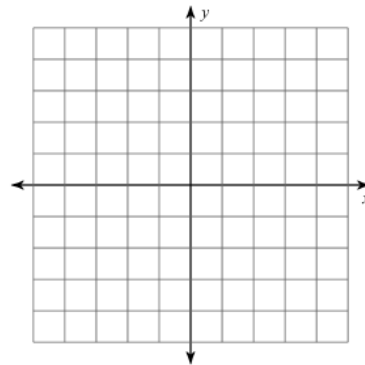
- 8) dilation of 0.25  
 $H(0, -3), G(0, 2), U(5, 1), A(5, -1)$



- 9) dilation of  $\frac{1}{2}$   
 $U(-4, 2), L(-3, 5), X(-1, 5)$

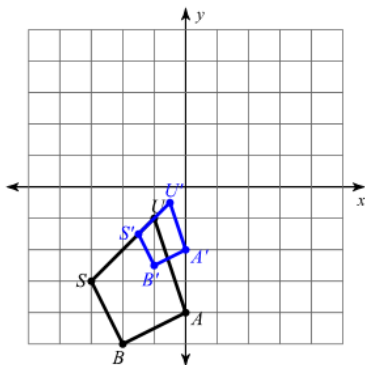


- 10) dilation of 1.5  
 $A(-2, 0), G(-2, 1), M(2, 3), U(1, -2)$

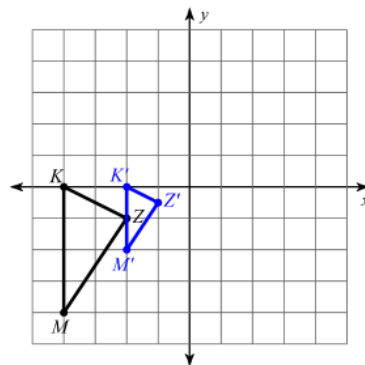


Write a rule to describe each transformation.

11)



12)

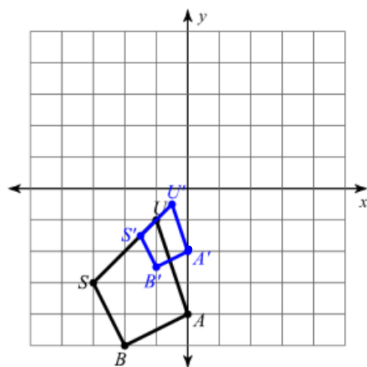




= Scale factor "

Write a rule to describe each transformation.

11)

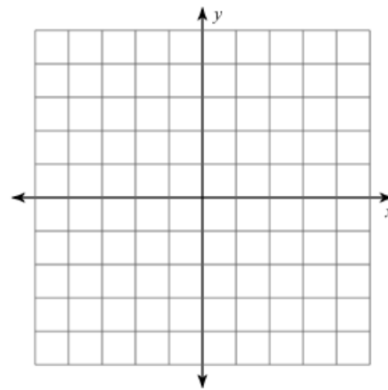


$u(-1, -1)$   
 $u'(-.5, -.5)$

Write the coordinates of the image.

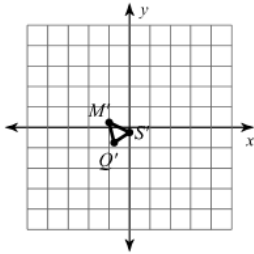
10) dilation of 1.5

$A(-2, 0), G(-2, 1), M(2, 3), U(1, -2)$

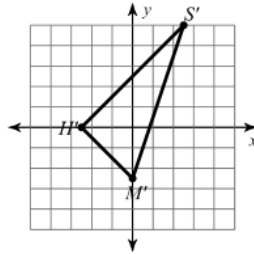


Answers to Dilations (ID: 2)

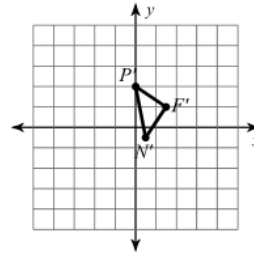
1)



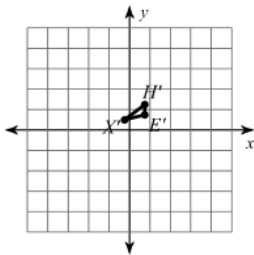
2)



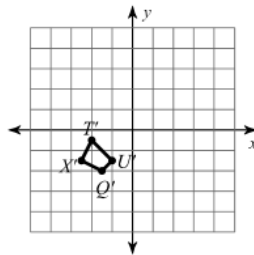
3)



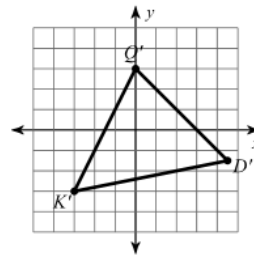
4)



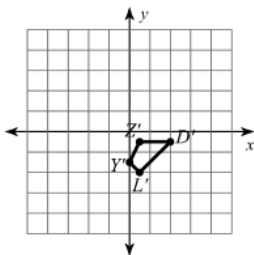
5)



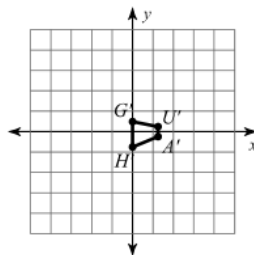
6)



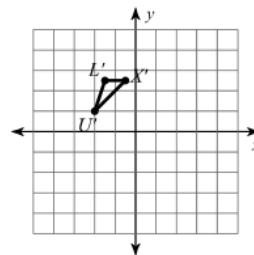
7)



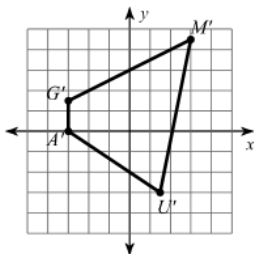
8)



9)



10)



11) dilation of  $\frac{1}{2}$

12) dilation of 0.5

