

28.

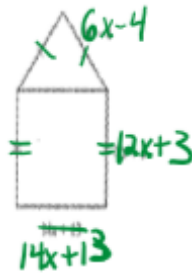
A model of a house is shown. What is the perimeter, in units, of the model?

A. $32x + 12$

C. $6x + 11$

B. $66x + 25$

D. $66x + 24$



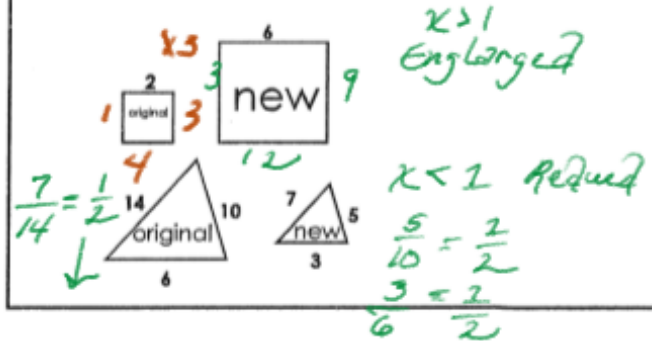
Scale Factor – the ratio of a new image to its original image

Find by using the ratio of corresponding sides.

Scale Factor

- WHEN SCALE FACTOR IS greater than 1, THE SHAPE GETS BIGGER (Enlarges).
- WHEN SCALE FACTOR IS Less THAN 1, BUT greater THAN 0, THE SHAPE GETS SMALLER (Reduces).

SCALE FACTOR.



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

Example 1:

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

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

$$\begin{aligned} G(0, -2) \times 2 &\rightarrow G'(0, -4) \\ H(1, 3) \times 2 &\rightarrow H'(2, 6) \\ I(4, 1) \times 2 &\rightarrow I'(8, 2) \end{aligned}$$

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

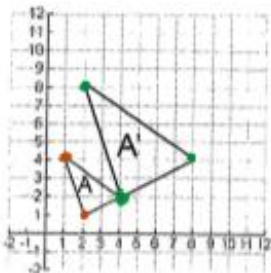
Example 2:

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

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

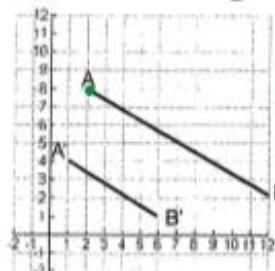
$$\begin{aligned} L(8, -8) \times \frac{1}{4} &\rightarrow L'(2, -2) \\ N(0, 16) \times \frac{1}{4} &\rightarrow N'(0, 4) \\ M(4, 5) \times \frac{1}{4} &\rightarrow M'(1, 5/4) \end{aligned}$$

Identify the scale factor of the following dilation.



$(2, 1) \rightarrow (4, 2)$
 $(1, 1) \rightarrow (2, 2)$
 $(2, 2) \rightarrow (4, 4)$

Identify the scale factor of the following dilation.

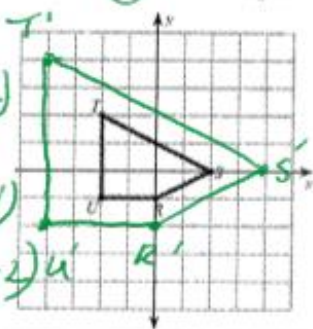


$(2, 8) \rightarrow (12, 2)$
 $(1, 4) \rightarrow (6, 1)$

Graph the given dilation.

dilation of 2 about the origin

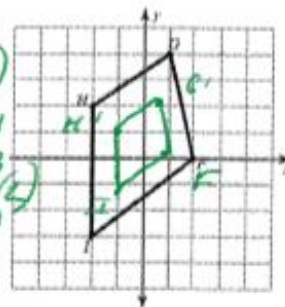
$R(0, 1) \rightarrow R'(0, -2)$
 $S(2, 0) \rightarrow S'(4, 0)$
 $T(-2, 2) \rightarrow T'(-4, 4)$
 $U(-2, -1) \rightarrow U'(-4, -2)$



Graph the given dilation.

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

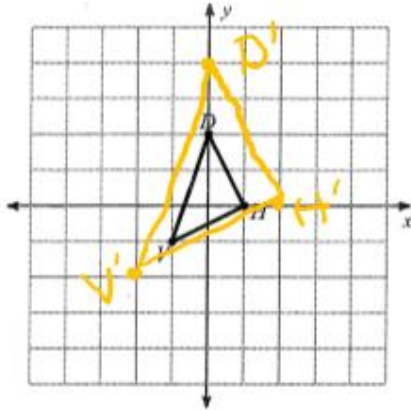
$G(1, 4) \rightarrow G'(\frac{1}{2}, 2)$
 $H(-2, 2) \rightarrow H'(-1, 1)$
 $I(-2, -3) \rightarrow I'(-1, -\frac{3}{2})$
 $F(0, 2) \rightarrow F'(0, 1)$



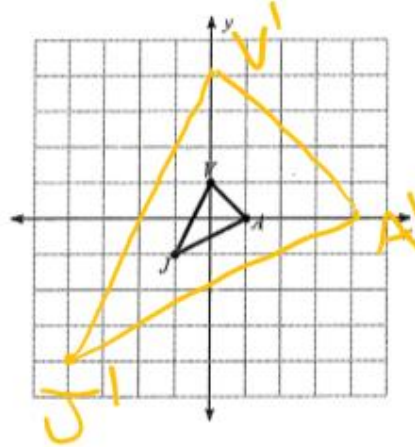
Dilations

Graph the image of the figure using the transformation given.

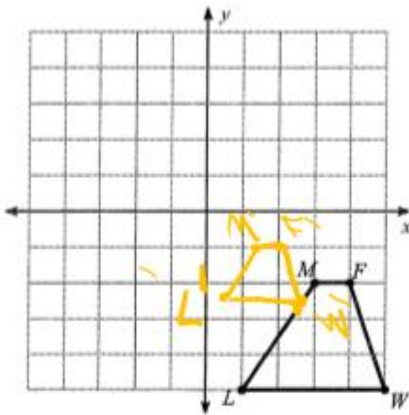
1) dilation of 2



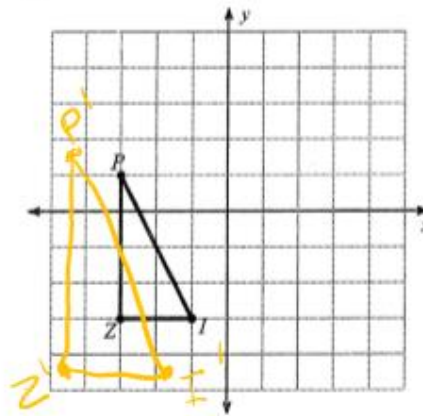
2) dilation of 4



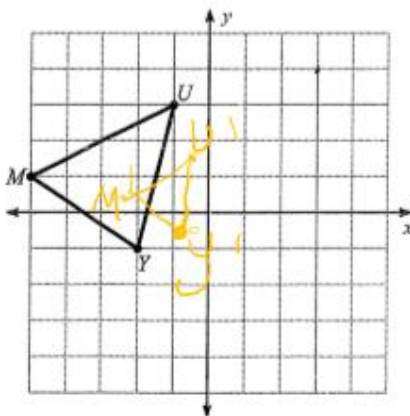
3) dilation of $\frac{1}{2}$



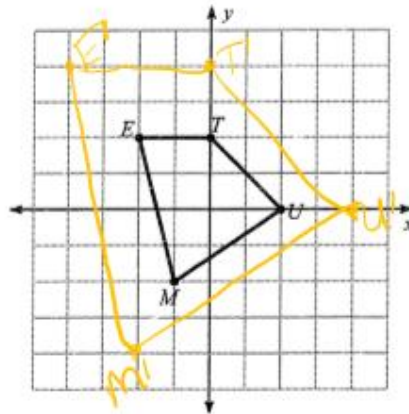
4) dilation of 1.5



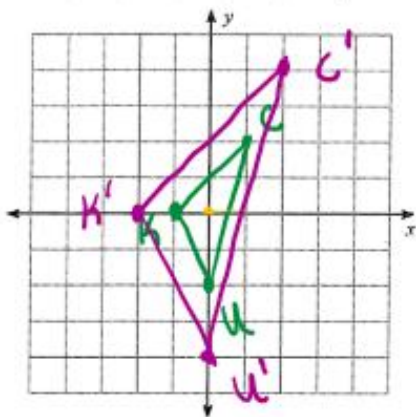
5) dilation of $\frac{1}{2}$



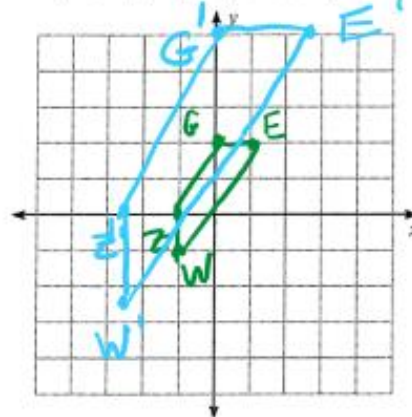
6) dilation of 2



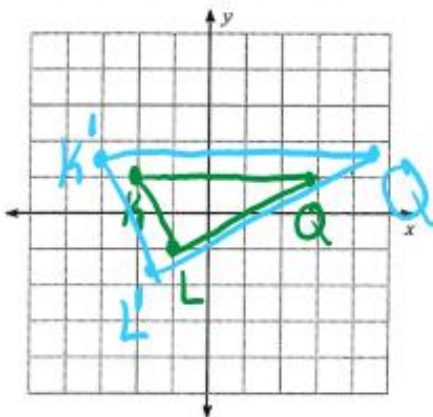
- 7) dilation of 2
 $K(-1, 0), C(1, 2), U(0, -2)$



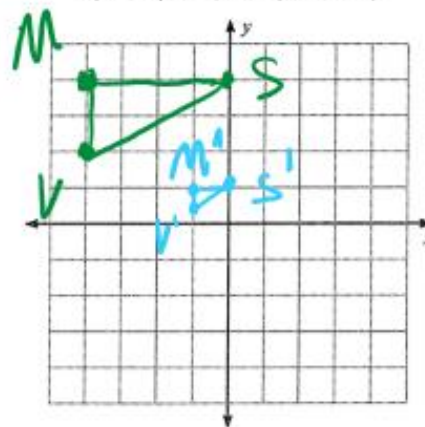
- 8) dilation of 2.5
 $Z(-1, 0), G(0, 2), E(1, 2), W(-1, -1)$



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

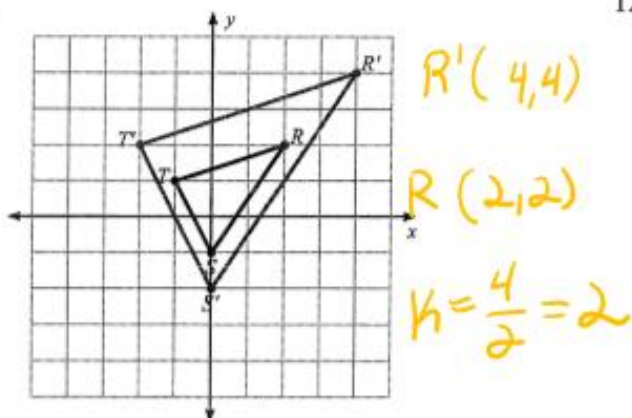


- 10) dilation of $\frac{1}{4}$
 $V(-4, 2), M(-4, 4), S(0, 4)$



Write a rule to describe each transformation.

11)



12)

