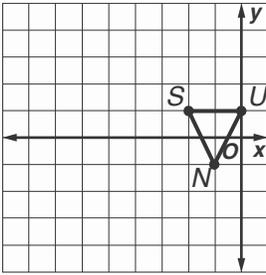


# Lesson 4 Homework Practice

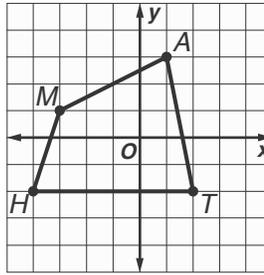
## Dilations

Find the coordinates of the vertices of each figure after a dilation with the given scale factor  $k$ . Then graph the original image and the dilation.

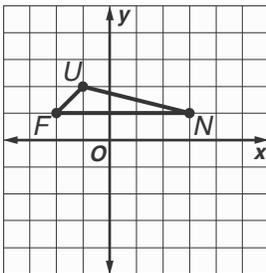
1.  $S(-2, 1)$ ,  $U(0, 1)$ ,  $N(-1, -1)$ ;  $k = 4$



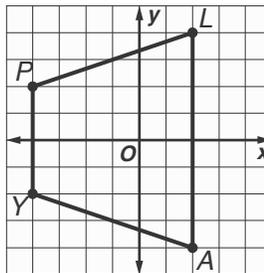
2.  $M(-3, 1)$ ,  $A(1, 3)$ ,  $T(2, -2)$ ,  $H(-4, -2)$ ;  $k = \frac{1}{2}$



3.  $F(-2, 1)$ ,  $U(-1, 2)$ ,  $N(3, 1)$ ;  $k = 2$



4.  $P(-4, 2)$ ,  $L(2, 4)$ ,  $A(2, -4)$ ,  $Y(-4, -2)$ ;  $k = \frac{1}{4}$



5. MAPS Rachel and her cousin, Lena, live in different cities that are about 100 miles apart. On a map, the two cities measure 5 inches apart. What is the scale factor used for the map?

6. GEOMETRY A square has vertices  $J(-1, 4)$ ,  $U(5, 4)$ ,  $M(5, -2)$ ,  $P(-1, -2)$ . After a dilation, square  $JUM P$  has vertices  $J(-0.5, 2)$ ,  $U(2.5, 2)$ ,  $M(2.5, -1)$ ,  $P(-0.5, -1)$ . What is the scale factor of the dilation?

7. LANDSCAPING A landscape designer has a drawing of a flower bed that measures 6 inches by 9 inches. The owner wants the actual flower bed to be 5 feet by 7.5 feet. What is the scale factor the designer must use to install the new flower bed?