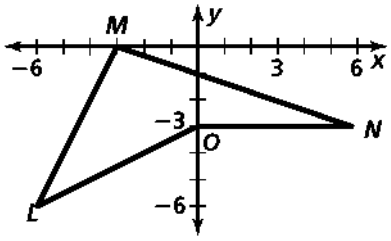
Name_____ Class_____ Date_____

Practice 9-5

Dilations

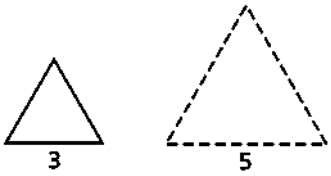
Use matrices to find the image of figure *LMNO* under a dilation centered at the origin with the given scale factor.



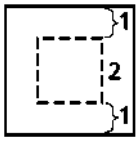
1. $\frac{1}{3}$ **2.** 5 **3.** 2

Find the scale factor for the dilation that maps the solid-line figure onto the dashed-line figure.

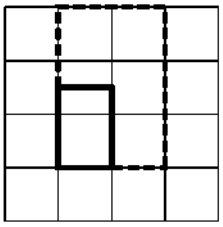
4.



5.

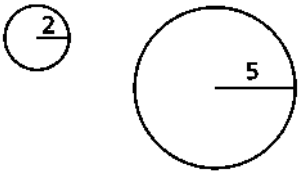


6.

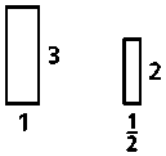


For each pair of figures, determine whether one figure is a dilation of the other.

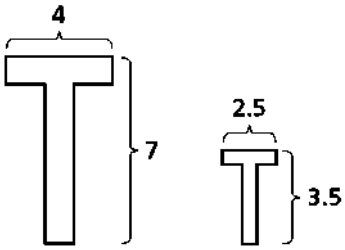
7.



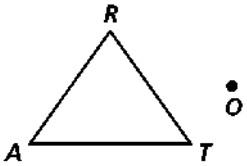
8.



9.



Draw $\triangle A'R'T'$ under the dilation with the given center and scale factor.



10. center *O,* scale factor $\frac{1}{2}$

11. center *T,* scale factor $\frac{1}{2}$

12. center *O,* scale factor 2

Find the image of $\triangle PQR$ for a dilation with center (0,0) and the given scale factor.

13. *P(−6,6),Q(−3,0),R(0, −3)*
scale factor 2

14. *P(*-2,1), *Q(5,-1),R(7,*8)
scale factor $\frac{1}{4}$

15. *P(*-7,2), *Q(1,8),R(-2,*2)
scale factor 3

16. *P(*-10,5), *Q(-5,0),R(0,*5)
scale factor $\frac{1}{5}$

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