

Name \_\_\_\_\_  
Mr. Schlansky

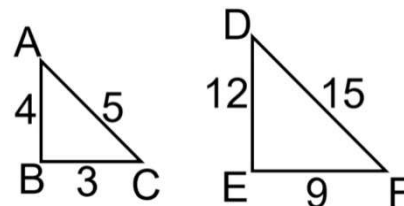
Date \_\_\_\_\_  
Geometry



## ***Finding Scale Factor and Center of Dilation***

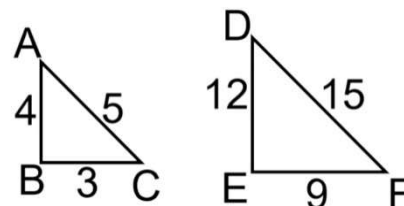
1. In the diagram below,  $\triangle DEF$  is the image of  $\triangle ABC$  after a dilation.

What is the scale factor of the dilation?



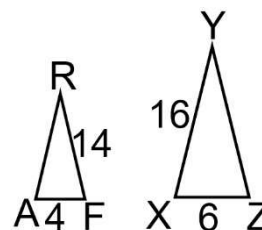
2. In the diagram below,  $\triangle ABC$  is the image of  $\triangle DEF$  after a dilation.

What is the scale factor of the dilation?



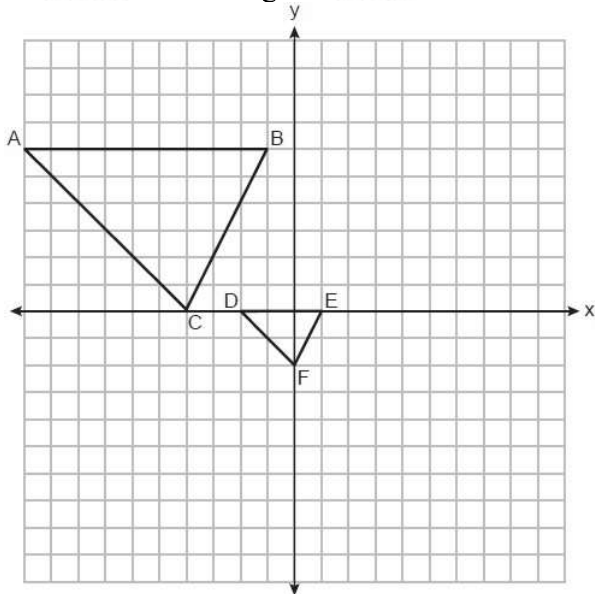
3. In the diagram below,  $\triangle XYZ$  is the image of  $\triangle RPF$  after a dilation.

What is the scale factor of the dilation?

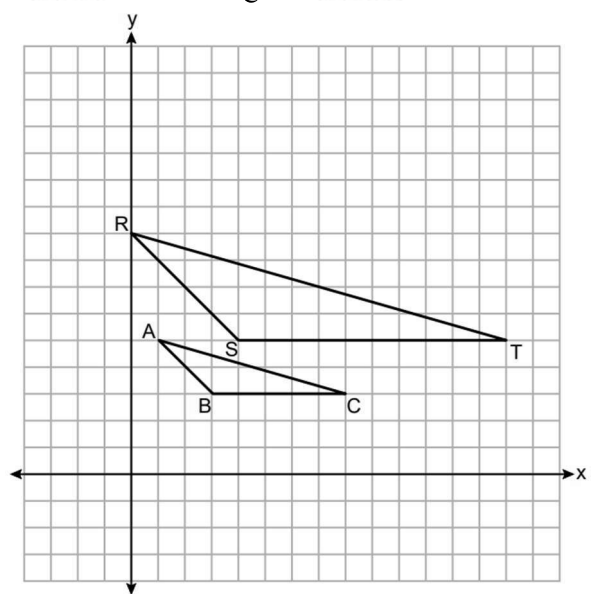


Find the center of dilation AND the scale factor if

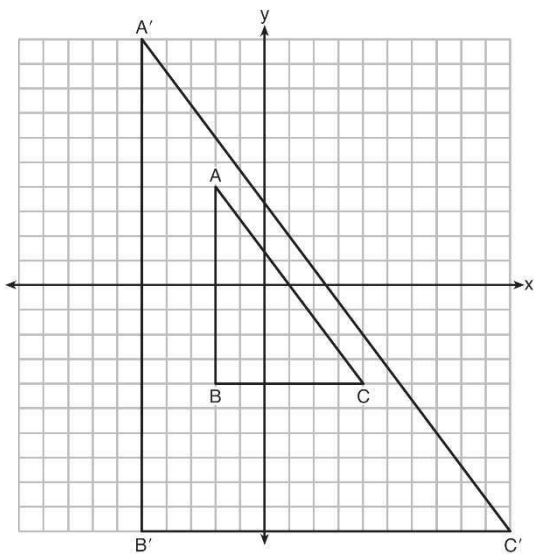
4.  $\triangle ABC$  is the image of  $\triangle DEF$



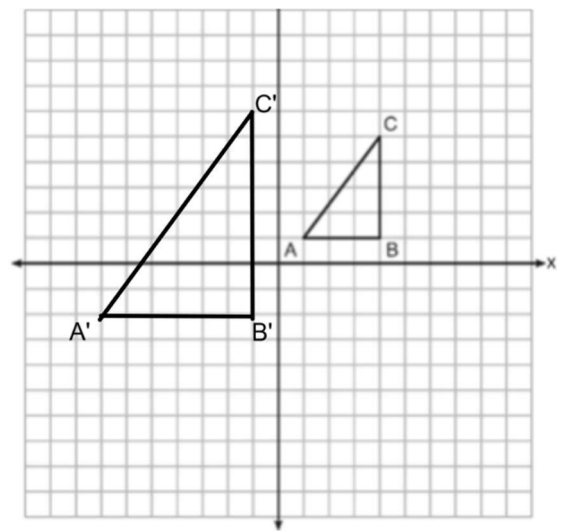
5.  $\triangle RST$  is the image of  $\triangle ABC$



6.  $\triangle A'B'C'$  is the image of  $\triangle ABC$



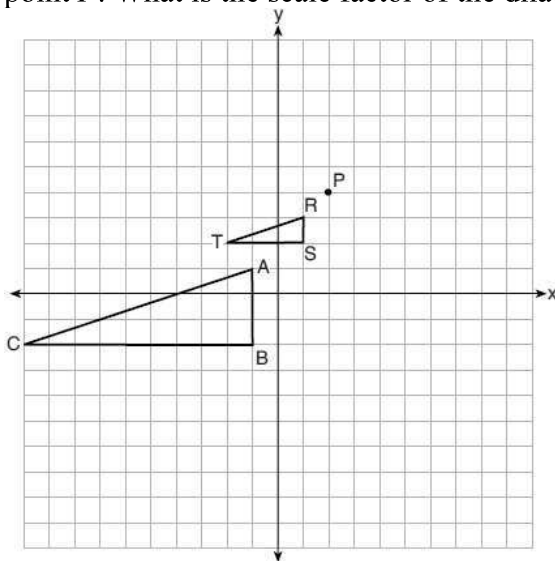
7.  $\triangle A'B'C'$  is the image of  $\triangle ABC$



8. After a dilation with center  $(0, 0)$ , the image of  $\overline{DB}$  is  $\overline{D'B'}$ . If  $DB = 4.5$  and  $D'B' = 18$ , what is the scale factor of this dilation?

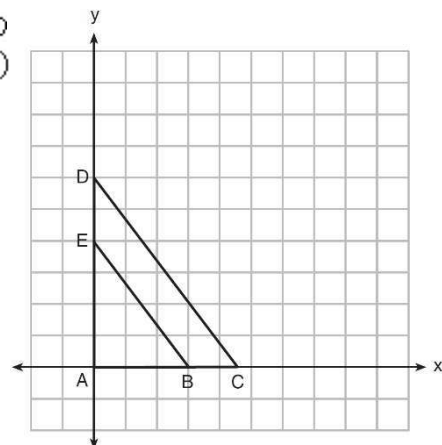
9.  $\overline{DR}$  is dilated centered at point D such that  $\overline{DR} = 8$  and  $\overline{D'R'} = 12$ . What is the scale factor of the dilation?

10. On the set of axes below,  $\triangle RST$  is the image of  $\triangle ABC$  after a dilation centered at point P. What is the scale factor of the dilation that maps  $\triangle ABC$  onto  $\triangle RST$ ?

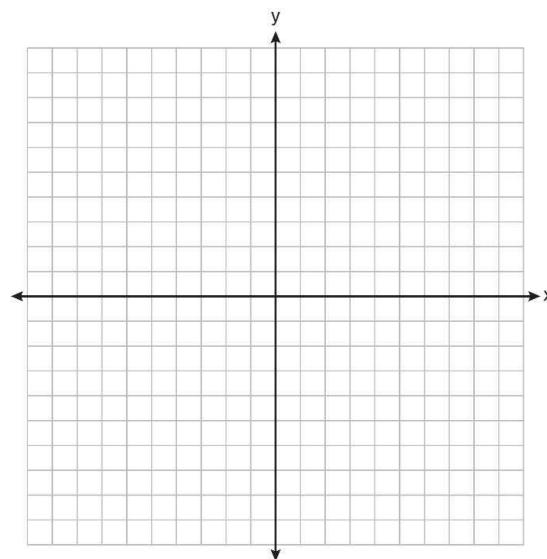


11. In the diagram below,  $\triangle ABE$  is the image of  $\triangle ACD$  origin. The coordinates of the vertices are  $A(0, 0)$ ,  $B(3, 0)$ . The scale factor of dilation is

- 1)  $\frac{2}{3}$
- 2)  $\frac{3}{2}$
- 3)  $\frac{3}{4}$
- 4)  $\frac{4}{3}$



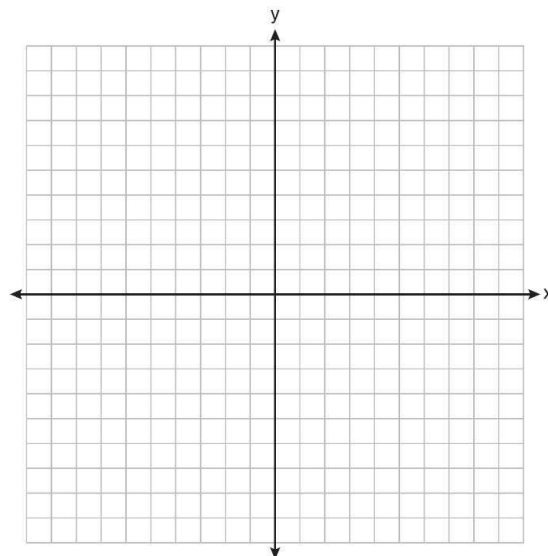
12.  $\triangle ABC$  has coordinates  $A(-2,8)$ ,  $B(6,8)$ , and  $C(8,5)$ . The coordinates of  $\triangle XYZ$ , the image of  $\triangle ABC$  after a sequence of transformations is  $X(1,2)$ ,  $Y(7,2)$ , and  $Z(8,0)$ . What is the scale factor?



13. After a dilation centered at the origin, the image of  $\overline{CD}$  is  $\overline{C'D'}$ . If the coordinates of the endpoints of these segments are  $C(2,-8)$ ,  $D(-7,-8)$ ,  $C'(3,4)$ , and  $D'(-3,4)$ . The scale factor of the dilation is

- 1)  $\frac{3}{2}$   
2)  $\frac{2}{3}$

- 3) 3  
4)  $\frac{1}{3}$



14. On the set of axes below,  $\triangle AB'C'$  is the image of  $\triangle ABC$ .

What is the scale factor and center of dilation that maps  $\triangle ABC$  onto  $\triangle AB'C'$ ?

- 1)  $\frac{1}{2}$  and the origin  
2) 2 and the origin  
3)  $\frac{1}{2}$  and vertex  $A$   
4) 2 and vertex  $A$

