

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

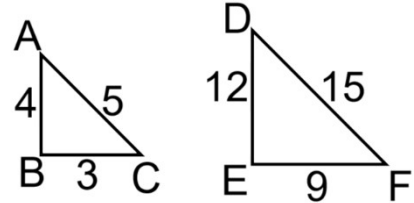
Date \_\_\_\_\_  
Geometry

## Scale Factor

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

What is the scale factor of the dilation:

Numerically:

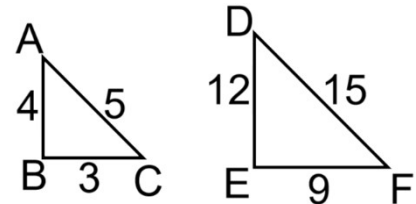


Segments:

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

What is the scale factor of the dilation:

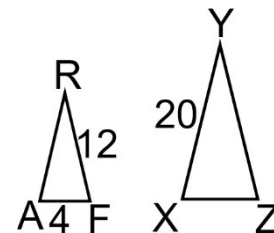
Numerically:



Segments:

3. In the diagram below, isosceles  $\triangle ARF$  is the image of  $\triangle XYZ$  after a dilation. What is the scale factor of the dilation:

Numerically:

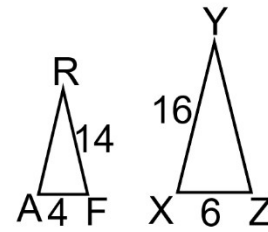


Segments:

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

What is the scale factor of the dilation:

Numerically:

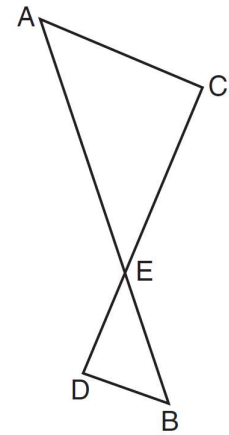


Segments:

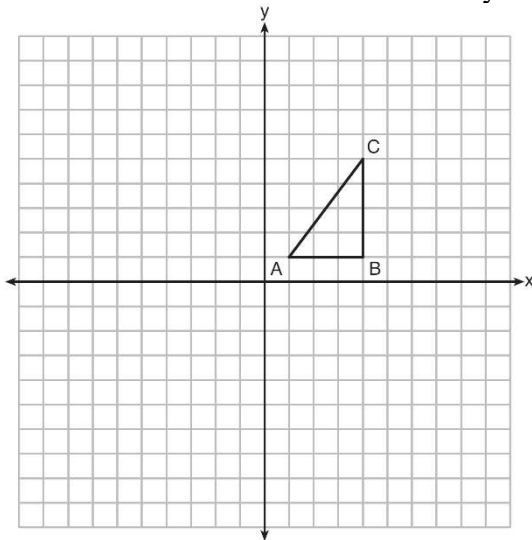
5. In the diagram below,  $\triangle ACE$  is the image of  $\triangle BDE$  after a sequence of transformations. If  $\overline{AE} = 6$ ,  $\overline{DE} = 3$ , and  $\overline{EB} = 4$ , What is the scale factor of the dilation:

Numerically:

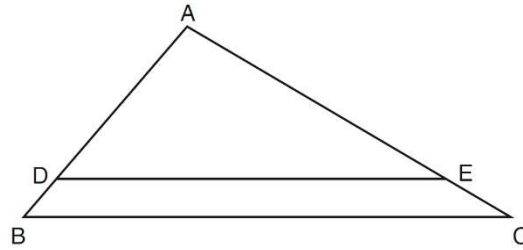
Segments:



6. In the diagram below,  $\triangle ABC$  has coordinates  $A(1, 1)$ ,  $B(4, 1)$ , and  $C(4, 5)$ . The coordinates of its image after a sequence of transformations is  $A'(-9, -2)$ ,  $B'(-3, -2)$ , and  $C'(-3, 6)$ . What is the scale factor of the dilation numerically and using segments?

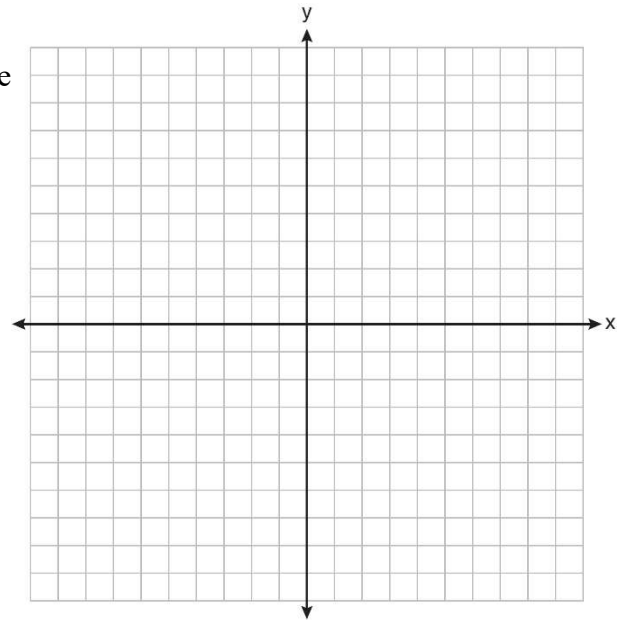


7. In the diagram shown below,  $\triangle ADE$  is the image of  $\triangle ABC$  after a dilation of  $k$  centered at point  $A$ .



If  $AB = 10$ ,  $AD = 8$ , and  $AE = 12$ , what is the value of  $k$ ?

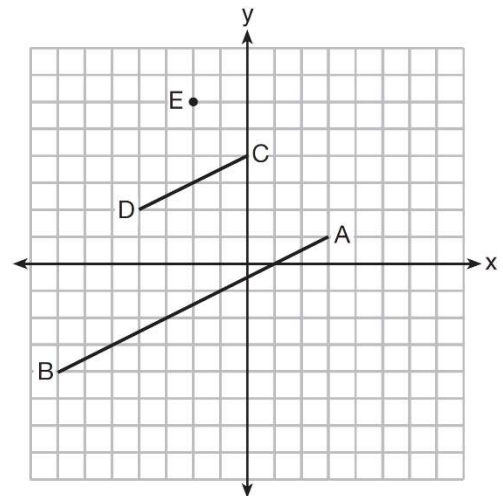
8.  $\triangle ABC$  has coordinates  $A(-2,8)$ ,  $B(6,8)$ , and  $C(8,5)$ . The coordinates of  $\triangle XYZ$ , the image of  $\triangle ABC$  after a sequence of transformations is  $X(1,2)$ ,  $Y(7,2)$ , and  $Z(8,0)$ . What is the scale factor?



9. In the diagram below,  $\overline{CD}$  is the image of  $\overline{AB}$  after a dilation of scale factor  $k$  with center  $E$ .

Which ratio is equal to the scale factor  $k$  of the dilation?

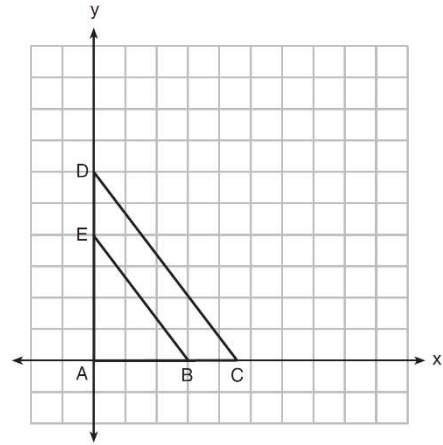
- 1)  $\frac{EC}{EA}$
- 2)  $\frac{BA}{EA}$
- 3)  $\frac{EA}{BA}$
- 4)  $\frac{EA}{EC}$



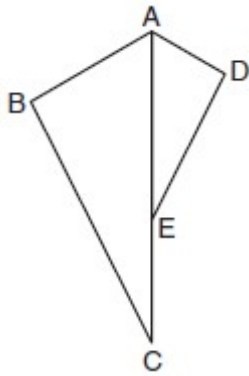
10. In the diagram below,  $\triangle ABE$  is the image of  $\triangle ACD$  after a dilation centered at the origin. The coordinates of the vertices are  $A(0, 0)$ ,  $B(3, 0)$ ,  $C(4.5, 0)$ ,  $D(0, 6)$ , and  $E(0, 4)$ .

The scale factor of dilation is

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



11. In the diagram below,  $\triangle ADE$  is the image of  $\triangle ABC$  after a reflection over the line  $AC$  followed by a dilation centered at point  $A$ . What is the scale factor of the dilation?



12. In the diagram below,  $\triangle ABC$  is the image of  $\triangle DBE$  after a dilation centered at point  $A$ . What is the scale factor of the dilation?

