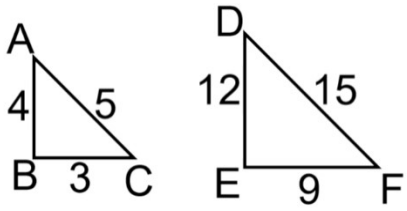
Name _____ Date _____
Mr. Schlansky Geometry

Scale Factor

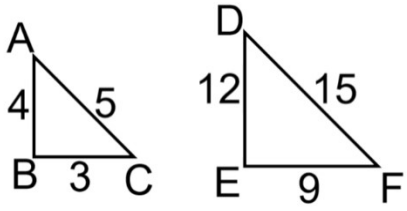
1. In the diagram below, ΔDEF is the image of ΔABC after a dilation.

What is the scale factor of the dilation?



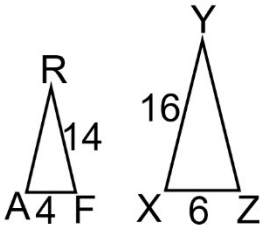
2. In the diagram below, ΔABC is the image of ΔDEF after a dilation.

What is the scale factor of the dilation?

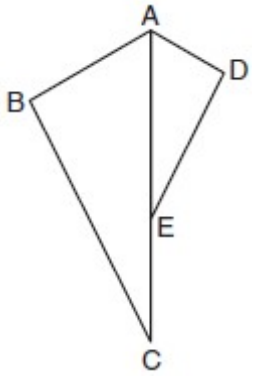


3. In the diagram below, ΔXYZ is the image of ΔARF after a dilation.

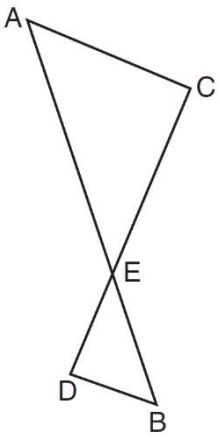
What is the scale factor of the dilation?



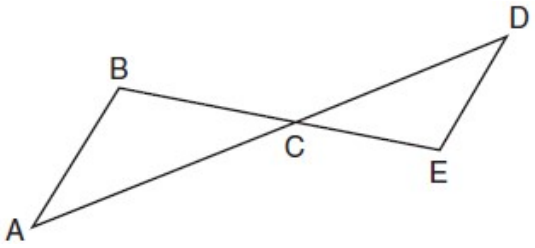
4. In the diagram below, $\triangle ADE$ is the image of $\triangle ABC$ after a reflection over the line AC followed by a dilation centered at point A. If $\overline{AB} = 12$, $\overline{DE} = 6$, and $\overline{AD} = 9$, what is the scale factor of the dilation?



5. In the diagram below, ΔACE is the image of ΔBDE after a sequence of transformations. If $\overline{AE} = 6$, $\overline{DE} = 3$, and $\overline{EB} = 4$, what is the scale factor?



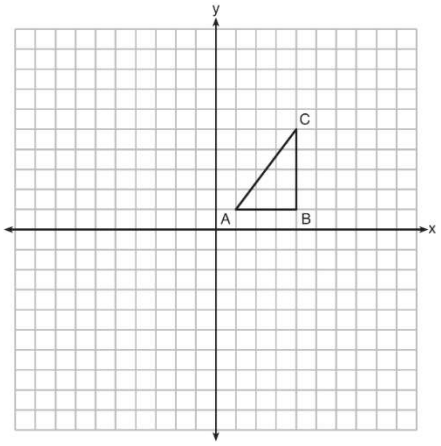
6. In the diagram below, ΔDCE is the image of ΔACB after a sequence of transformations. If $\overline{AC} = 9$, $\overline{CE} = 3$, and $\overline{CD} = 6$, what is the scale factor?



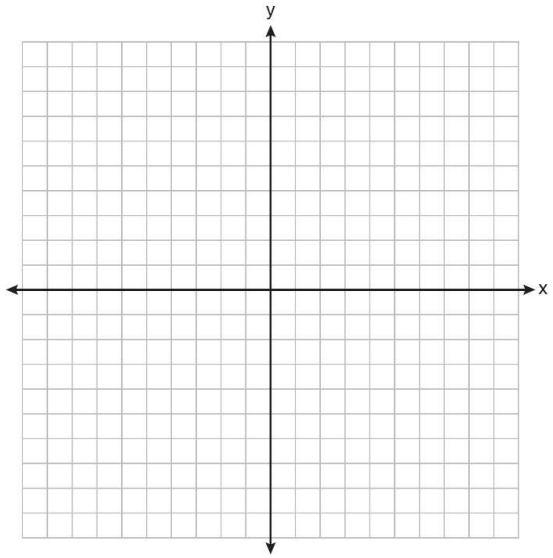
7. After a dilation with center $(0,0)$, the image of $\overline{DB}$ is $\overline{D'B'}$. If $DB = 4.5$ and $D'B' = 18$, what is the scale factor of this dilation?

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

9. 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?



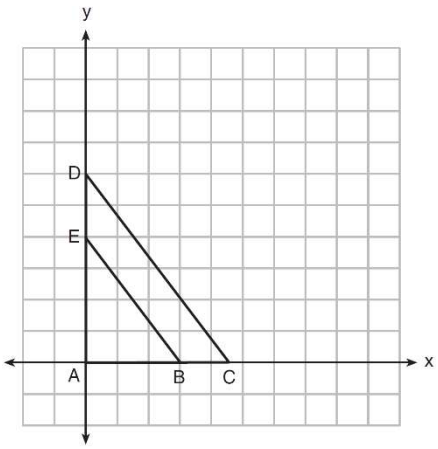
10. $\triangle ABC$ has coordinates $A(-2,8), B(6,8),$ *and* $C(8,5)$. The coordinates of ΔXYZ, the image of ΔABC after a sequence of transformations is $X(1,2), Y(7,2),$ *and* $Z(8,0)$. What is the scale factor?



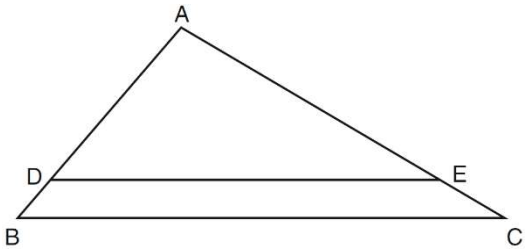
11. In the diagram below, $\triangle ABE$ is the image of $\triangle ACD$ after a dilation centered at the origin. The coordinates of the vertices are $A(0,0)$, $B(3,0)$, $C(4.5,0)$, $D(0,6)$, and $E(0,4)$.

The scale factor of dilation is

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



12. In the diagram shown below, ΔADE is the image of ΔABC after a dilation of k centered at point A. If $AB = 10$, $AD = 8$, and $AE = 12$, what is the value of k?



13. In the diagram below, ΔABC is the image of ΔDBE after a dilation centered at point A. If $\overline{AB} = 20$, $\overline{DE} = 8$, and $\overline{DB} = 10$, what is the scale factor?