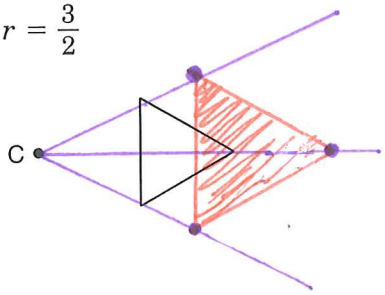
NAME _____ DATE _____ PERIOD ____

9-5 Practice

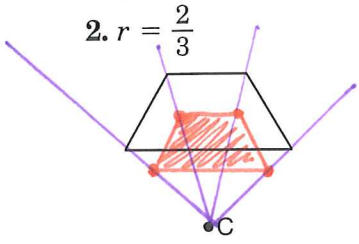
Dilations

Draw the dilation image of each figure with center C and the given scale factor.

1. $r = \frac{3}{2}$



2. $r = \frac{2}{3}$



Find the measure of the dilation image $\overline{A'T'}$ or of the preimage $\overline{AT}$ using the given scale factor.

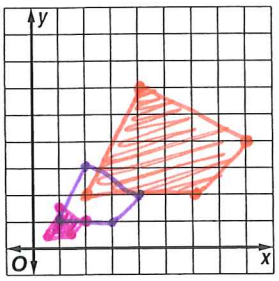
3. $AT = 15, r = \frac{3}{5}$ A'T' = 9

4. $AT = 30, r = -\frac{1}{6}$ A'T' = 5

5. $A'T' = 12, r = \frac{4}{3}$ AT = 9

COORDINATE GEOMETRY Find the image of each polygon, given the vertices, after a dilation centered at the origin with a scale factor of 2. Then graph a dilation centered at the origin with a scale factor of $\frac{1}{2}$.

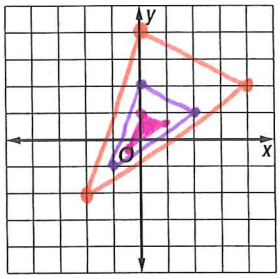
6. $A(1, 1), C(2, 3), D(4, 2), E(3, 1)$



r = 2

r = 1/2

7. $Q(-1, -1), R(0, 2), S(2, 1)$

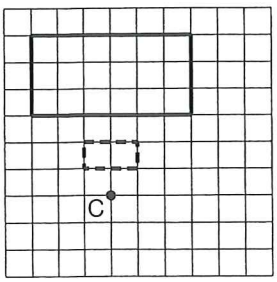


r = 2

r = 1/2

Determine the scale factor for each dilation with center C. Determine whether the dilation is an *enlargement*, *reduction*, or *congruence transformation*. The dotted figure is the dilation image.

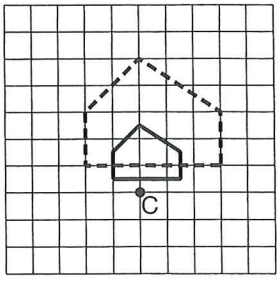
8.



r = 1/3

reduction

9.



r = 2

enlargement

10. PHOTOGRAPHY Estebe enlarged a 4-inch by 6-inch photograph by a factor of $\frac{5}{2}$. What are the new dimensions of the photograph?

10 in. by 15 in.