

NAME _____

DATE _____

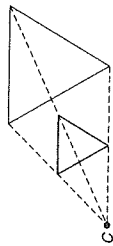
PERIOD _____

9-5 Skills Practice

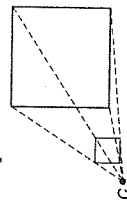
Dilations

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

1. $r = 2$



2. $r = \frac{1}{4}$



Find the measure of the dilation image $\overline{M'N'}$ or of the preimage \overline{MN} using the given scale factor.

3. $MN = 3, r = 3$

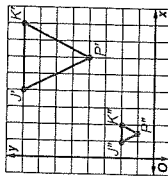
$M'N' = 9$

4. $M'N' = 7, r = 21$

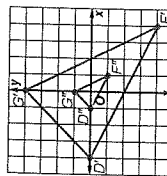
$MN = \frac{1}{3}$

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 $\frac{1}{2}$.

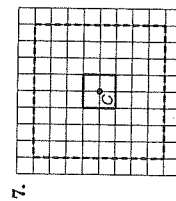
5. $J(2, 4), K(4, 4), P(3, 2)$



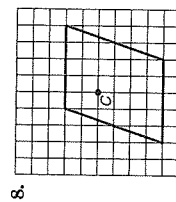
6. $D(-2, 0), G(0, 2), F(2, -2)$



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



4; enlargement



1; congruence transformation

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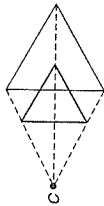
PERIOD _____

9-5 Practice

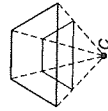
Dilations

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. $AT = 30, r = -\frac{1}{6}$

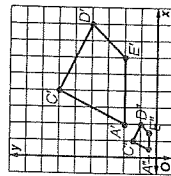
$A'T' = 5$

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

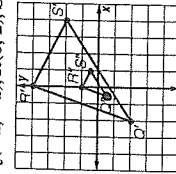
$AT = 9$

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 $\frac{1}{2}$.

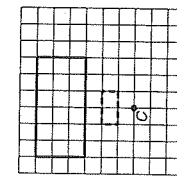
6. $A(1, 1), C(2, 3), D(4, 2), E(3, 1)$



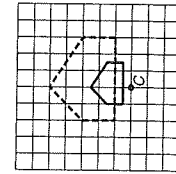
7. $Q(-1, -1), R(0, 2), S(2, 1)$



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. $\frac{1}{3}$; reduction



9. 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.**