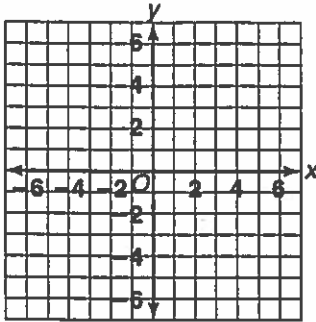


Practice 4-5

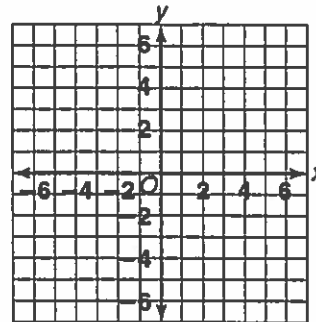
Similarity Transformations

Graph the coordinates of the quadrilateral $ABCD$. Find the coordinates of its image $A'B'C'D'$ after a dilation with the given scale factor.

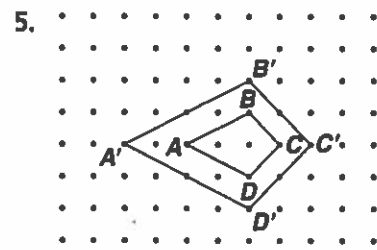
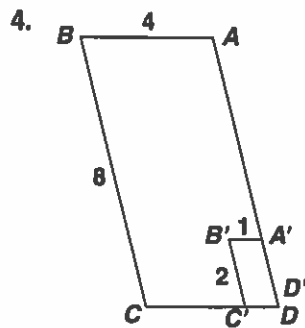
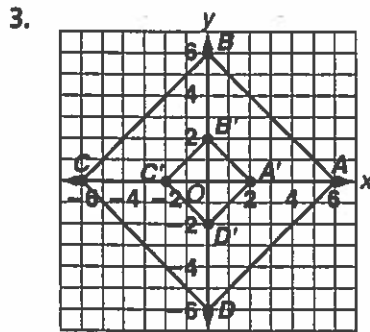
1. $A(2, -2), B(3, 2), C(-3, 2), D(-2, -2)$;
scale factor 2



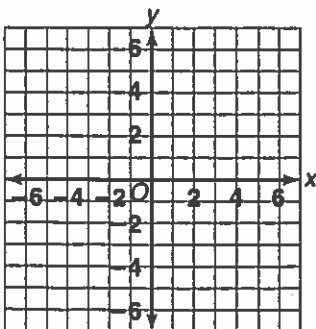
2. $A(6, 3), B(0, 6), C(-6, 2), D(-6, -5)$;
scale factor $\frac{1}{2}$



Quadrilateral $A'B'C'D'$ is a dilation of quadrilateral $ABCD$. Find the scale factor. Classify each dilation as an enlargement or a reduction.



6. A triangle has coordinates $A(-2, -2), B(4, -2)$, and $C(1, 1)$. Graph its image $A'B'C'$ after a dilation with scale factor $\frac{3}{2}$. Give the coordinates of $A'B'C'$, and the ratio of the areas of the figures $A'B'C'$ and ABC .



Puzzle 4-5

Similarity Transformations

The table below gives information about four dilations. Some of the information is missing. Complete the table. Shade in each answer you write in the table on the maze at the bottom of the page. Correct answers will take you from *Start* to *End*.

Coordinates of Image	Point of Dilation	Scale of Dilation	Coordinates of Dilated Image
$A(2, 1), B(10, 1), C(2, 5)$	A	$\frac{1}{2}$	$A'(_, _), B'(_, _), C'(_, _)$
$D(_, _), E(_, _), F(_, _)$	F	$\frac{1}{2}$	$D'(5, 6), E'(8, 6), F'(5, 9)$
$G(1, 0), H(1, 4), I(5, 4), J(5, 0)$	_____	$\frac{1}{2}$	$G'(3, 0), H'(3, 2), I'(5, 2), J'(5, 0)$
$K(1, 8), L(5, 8), M(5, 6), N(1, 6)$	K	_____	$K'(1, 8), L'(3, 8), M'(3, 7), N'(1, 7)$

Start	2	1	6	3	1
2	1	6	2	4	2
1	6	1	5	9	1
6	1	11	3	J	2
1	2	3	2	$\frac{1}{2}$	End
5	3	5	11	9	$\frac{1}{2}$