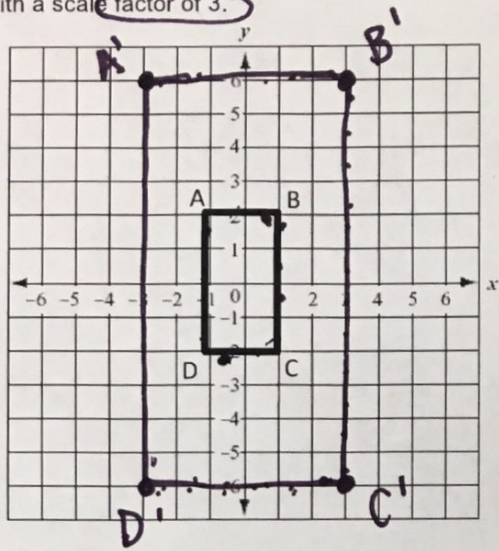


Dilations

Name: Key

1. Perform a size transformation (dilation) with a scale factor of 3.



2. Complete the table:

Preimage	Image
A (-1, 2)	A' (-3, 6)
B (1, 2)	B' (3, 6)
C (1, -2)	C' (3, -6)
D (-1, -2)	D' (-3, -6)
What is the perimeter of the preimage? 12	What is the perimeter of the image? 36
What is the area of the preimage? 8	What is the area of the image? 72

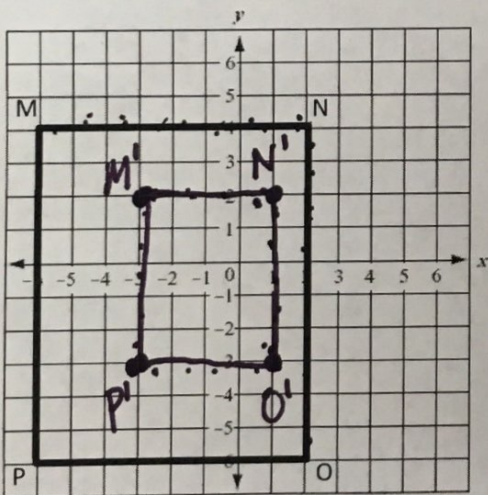
3. How do the perimeters of quadrilateral ABCD and quadrilateral A'B'C'D' compare?

The image is 3 times preimage

4. How do the areas of quadrilaterals ABCD and A'B'C'D' appear to be related? State a conjecture. Test your conjecture. How does the magnitude of the size transformation come into play here?

Area is 9 times preimage b/c $3^2 = 9$

5. Perform a size transformation of Magnitude 0.5.



6. Complete the table:

Preimage	Image
M (-6, 4)	M' (-3, 2)
N (2, 4)	N' (1, 2)
O (2, -6)	O' (1, -3)
P (-6, -6)	P' (-3, -3)
What is the perimeter of the preimage? 36	What is the perimeter of the image? 18
What is the area of the preimage? 80	What is the area of the image? 20

3. How do the perimeters of quadrilateral MNOP and quadrilateral M'N'O'P' compare?

The image is $\frac{1}{2}$ size of preimage

4. How do the areas of quadrilaterals MNOP and M'N'O'P' appear to be related? State a conjecture. Test your conjecture. How does the magnitude of the size transformation come into play here?

Image is $\frac{1}{4}$ preimage $(\frac{1}{2})^2 = \frac{1}{4}$