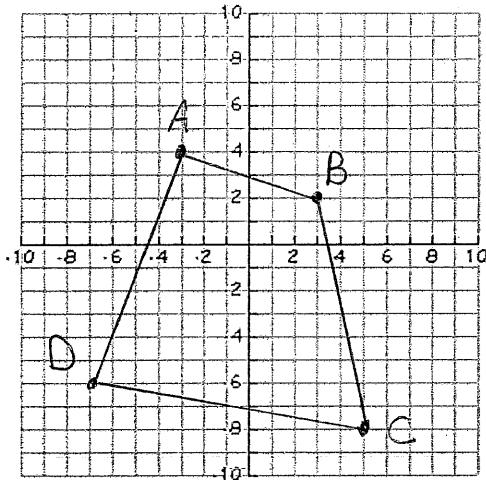
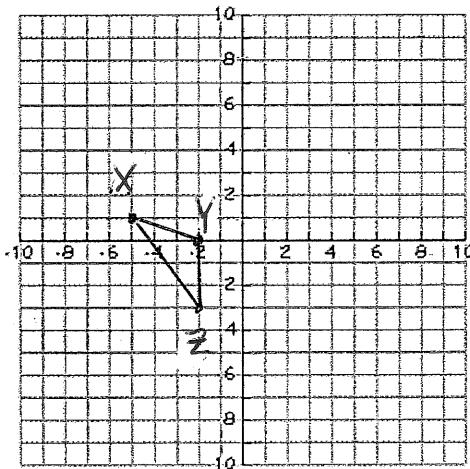


Geometry Dilations WS #3 Dilations with center of dilation Not at Origin

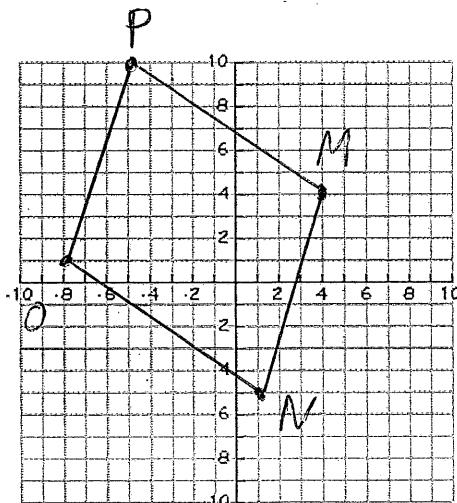
1. Graph the dilated image of Quadrilateral ABCD using a scale factor of $\frac{1}{2}$ and center of dilation (1, -2)



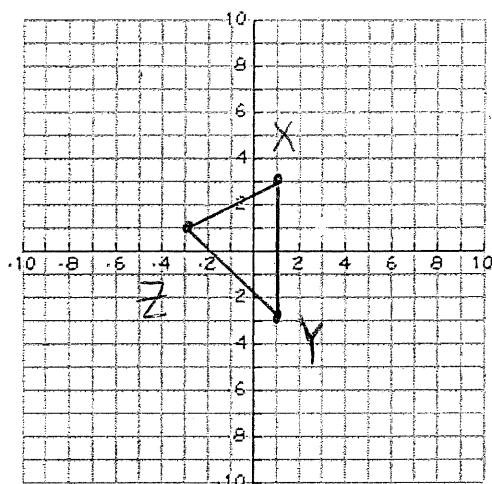
2. Graph the dilated image of Triangle XYZ using a scale factor of 2 and center-of dilation (-3, -1)



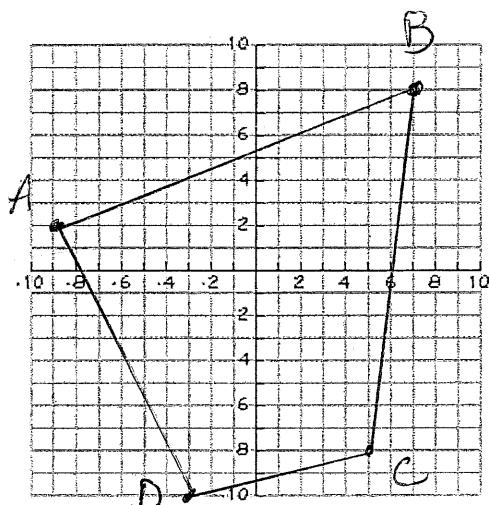
3. Graph the dilated image of Quadrilateral MNOP using a scale factor of $\frac{2}{3}$ and center of dilation (-2, 1)



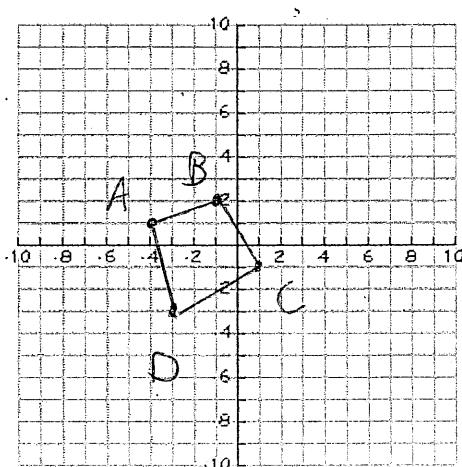
4. Graph the dilated image of Triangle XYZ using a scale factor of $\frac{5}{2}$ and center of dilation (-1, 1)



5. Graph the dilated image of Quadrilateral ABCD using a scale factor of $\frac{1}{2}$ and center of dilation (1, -2)

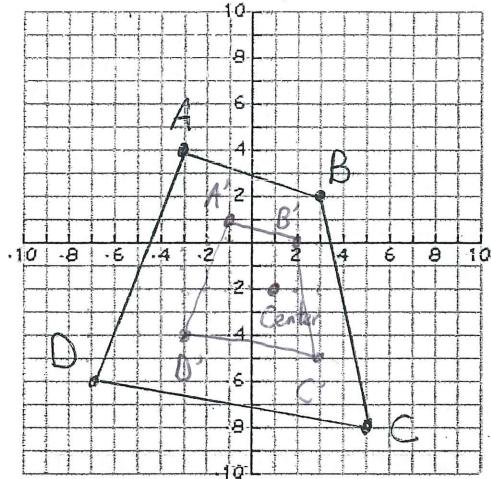


6. Graph the dilated image of Quadrilateral ABCD using a scale factor of 3 and center of dilation (-2, 0)



* start count from the
center of dilation *

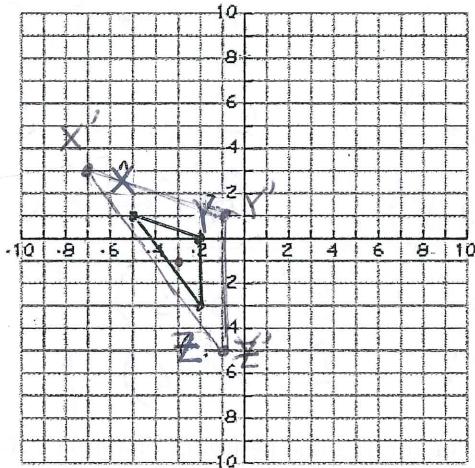
1. Graph the dilated image of Quadrilateral ABCD using a scale factor of $\frac{1}{2}$ and center of dilation (1, -2)



$$\begin{aligned} A(-4, 4) &\rightarrow A'(-2, 3) \\ B(2, 2) &\rightarrow B'(1, 1) \\ C(4, -4) &\rightarrow C'(2, -3) \\ D(-8, -4) &\rightarrow D'(-4, -2) \end{aligned}$$

| | |
|--------------------------|---------------------------|
| $A' \underline{(-1, 1)}$ | $C' \underline{(3, -5)}$ |
| $B' \underline{(2, 0)}$ | $D' \underline{(-3, -4)}$ |

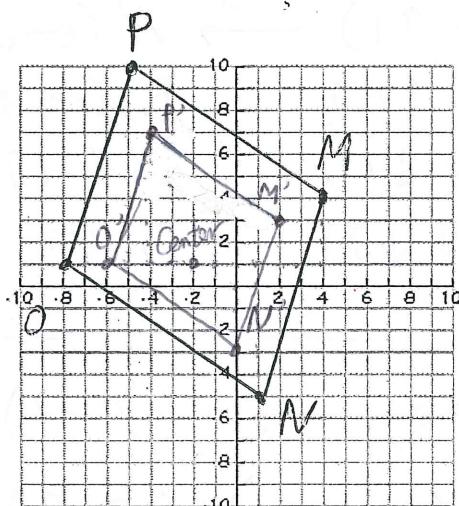
2. Graph the dilated image of Triangle XYZ using a scale factor of 2 and center of dilation (-3, -1)



$$\begin{aligned} X(-2, 2) &\rightarrow X'(-7, 3) \\ Y(1, 1) &\rightarrow Y'(-1, 1) \\ Z(1, -2) &\rightarrow Z'(-1, -5) \end{aligned}$$

| |
|--------------|
| $X'(-7, 3)$ |
| $Y'(-1, 1)$ |
| $Z'(-1, -5)$ |

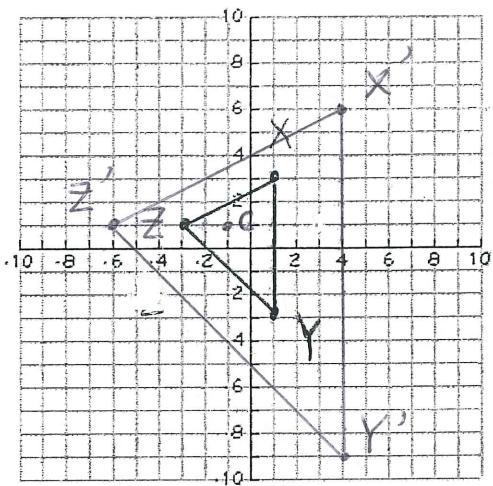
3. Graph the dilated image of Quadrilateral MNOP using a scale factor of $\frac{2}{3}$ and center of dilation (-2, 1)



$$\begin{aligned} M(6, 3) &\rightarrow M'(4, 2) \\ N(3, -6) &\rightarrow N'(2, -4) \\ O(-6, 0) &\rightarrow O'(-4, 1) \\ P(-3, 7) &\rightarrow P'(-2, 6) \end{aligned}$$

| |
|-------------|
| $M'(4, 2)$ |
| $N'(2, -4)$ |
| $O'(-4, 1)$ |
| $P'(-2, 6)$ |

4. Graph the dilated image of Triangle XYZ using a scale factor of $\frac{5}{2}$ and center of dilation $(-1, 1)$



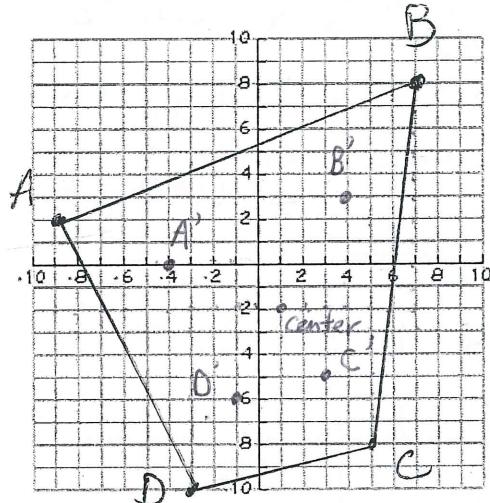
$$X(2, 4) \xrightarrow{k=\frac{5}{2}} X'(5, 15)$$

$$Y(4, -2) \xrightarrow{} Y'(5, 10)$$

$$Z(-2, 0) \xrightarrow{} Z'(-5, 0)$$

| |
|-------------|
| $X'(5, 15)$ |
| $Y'(5, 10)$ |
| $Z'(-5, 0)$ |

5. Graph the dilated image of Quadrilateral ABCD using a scale factor of $\frac{1}{2}$ and center of dilation $(1, -2)$



$$A(-10, 4) \xrightarrow{k=\frac{1}{2}} A'(-5, 2)$$

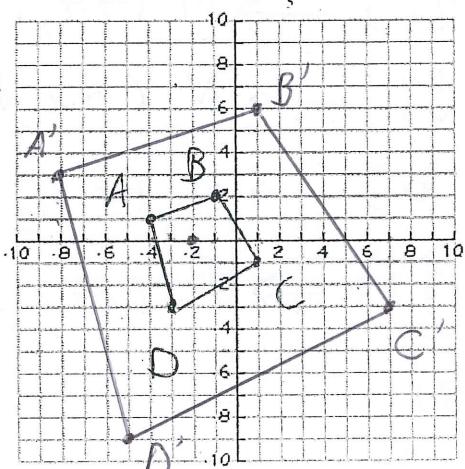
$$B(6, 8) \xrightarrow{} B'(3, 5)$$

$$C(4, -6) \xrightarrow{} C'(2, -3)$$

$$D(-4, -8) \xrightarrow{} D'(-2, -4)$$

| | |
|-------------|--------------|
| $A'(-5, 2)$ | $C'(2, -3)$ |
| $B'(3, 5)$ | $D'(-2, -4)$ |

6. Graph the dilated image of Quadrilateral ABCD using a scale factor of 3 and center of dilation $(-2, 0)$



$$A(-2, 1) \xrightarrow{k=3} A'(-6, 3)$$

$$B(1, 2) \xrightarrow{} B'(3, 6)$$

$$C(3, -1) \xrightarrow{} C'(9, -3)$$

$$D(-1, -3) \xrightarrow{} D'(-3, -9)$$

| | |
|-------------|--------------|
| $A'(-6, 3)$ | $C'(9, -3)$ |
| $B'(3, 6)$ | $D'(-3, -9)$ |