Handout 4: With a Wave of a Magic Want, We Transform You
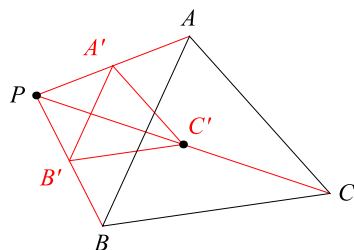

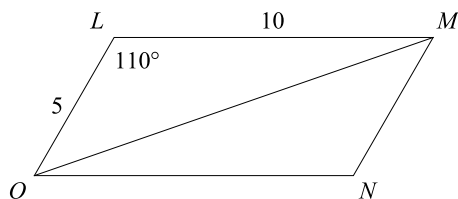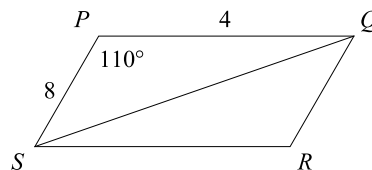Figure 1

Figure 2

Use Figure 1 for questions 1-5.

1. Draw the image of $\Delta A'B'C'$ under dilation about P of ratio $\frac{1}{2}$.

2. If $BC = 12$, what is the length of $\overline{B'C'}$?

3. If $PA' = 5$, what is the length of $\overline{PA}$?

4. If $PC = 15$, what is the length of $\overline{P'C'}$?

5. If $B'C' = 22$, what is the length of $\overline{BC}$?

6. The preimage is 7 units away from the center of dilation, while the image is 10 units away. Is the dilation an enlargement, reduction, or congruency?

7. A dilation has a scale factor of $\frac{1}{2}$. Is it an enlargement, reduction, or congruency?

8. One side of a triangle has length 2, while the corresponding side of a similar triangle has length 3. If the larger triangle is the image, what scale factor was used in the dilation?

Use the image of parallelograms $LMNO$ and $PQRS$ in Figure 2 for questions 9-10.

9. Determine if the shapes are similar. Justify.

10. If $OM = 14$ and $SQ = 2x + 3$, what is the value of x?